CWA COMPLIANCE EVALUATION INSPECTION REPORT
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 5

Purpose:
Compliance Evaluation Sampling Inspection

Facility:
New Horizons Dairy LLC
Ex. 6 (Personal Privacy)
Brown County
Ex. 6 (Personal Privacy)

NPDES Permit Number:
WI-00624280-02-0

Date of Inspection:
April 29, 2014

EPA Representatives:
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Facility Representatives:
Ex. 6 (Personal Privacy) Facility Owner FOIA Exemption (b) (6)

Consultant (Arrived during records review):
Nate Nysse, Crop Advisor FOIA Exemption (b) (6)

Report Prepared by:
Cheryl Burdett, CAFO Program Manager

Report Date:
December 4, 2014

Inspector Signature _____

1. BACKGROUND

The purpose of this report is to describe, evaluate and document New Horizons Dairy LLC's compliance with the Clean Water Act (CWA) at its De Pere, Wisconsin facility on April 29, 2014. This inspection was performed pursuant to Section 308(a) of the Federal Water Pollution Control Act, as amended.

New Horizons Dairy LLC (New Horizons) is a large dairy in northeast Wisconsin. The facility confines approximately 800 mature dairy cows and is a considered a large CAFO based on that number of mature milking and dry dairy cows. Wisconsin Department of Natural Resources (WDNR) refers to the National Pollutant Discharge Elimination System (NPDES) permit as a Wisconsin Pollutant Discharge Elimination System (WPDES) permit. New Horizons is covered under WPDES permit WI-00624280-02-0.

Surface flow from the New Horizons' production area flows to Apple Creek; to the west, to the north, and/or off the southwest side of the production area to a storm water pathway that flows south into an unnamed intermittent tributary that flows north into Apple Creek, a water of the United States. Apple Creek flows east into the Fox River, a Traditional Navigable Water.

New Horizons was inspected by WDNR on June 7, 2012. In the inspection report, WDNR documented concerns about runoff from the Silage Bunkers.

2. SITE INSPECTION

Table 1: Site Entry

Arrival Time:	9:45 A.M
Temperature:	Approximately 50 °F
Precipitation:	Rain the previous night within 24 hours
Presented credentials?	Yes
Credentials presented to whom and at what time?	EPA and WNR met with the facility owner at approximately 9:45 AM
EPA vehicle parked in approved location?	Yes
Location where EPA vehicle was parked?	EPA parked their vehicle east of the Fresh Cow Ban and south of the feed bins that are south of empty building attached to the Fresh Cow Barn
Disposable boots worn?	Yes
Other bio-security measures taken:	No other biosecurity clothing was worn during the inspection, EPA did not enter any barns. Approval for parking EPA's vehicle was given by the facility owner.

2.1 Records Review **(The following Records Review tables reflect information provided before the walk-through of the facility, unless otherwise noted.)**

Table 2: Documents

Checklist(s) Used	
R5 CAFO Inspection Checklist	
Federal CAFO Nutrient Management Plan Checklist	
Facility Documents Reviewed:	
Nutrient Management Plan (NMP)	
WPDES Permit	
If photographs or documents were taken, does the facility consider any to be Confidential Business Information (CBI)?	No
Which information does the facility consider to be CBI?	None

Table 3: Facility Description

Type of Animal	**Number of Animals**	**Capacity**	**Type of Confinement**
Mature Dairy Cows	800	700	Freestall Barn
Heifers	175	700	Barns, feedlots and pasture

Minimum Number of Animals in previous 5 years:	700 mature dairy cows
Maximum Number of Animals in previous 5 years:	800 mature dairy cows
Number of Animals that are stabled/confined and/or fed/maintained for 45 days or more in previous 12 months:	800 milking and dry dairy cows
Amount of Liquid Manure Generated per year:	11 million gallons
Amount of Solid Manure Generated per year:	50 tons
Does the facility have an NPDES Permit?	Yes – WPDES Permit WI-00624280-02-0
SIC or NAICS code:	0241
Do animals have direct access to WOUS?	No
Are crops, vegetation, forage growth, or post-harvest residues sustained in the normal growing season over any portion of the lot or facility where animals are kept?	Yes, on the south side of Earthen Storage Structure and west side of the production area.
What is the area (acres) of the production area?	Approximately 11 acres
What is the area (acres) of the pasture?	Approximately 8.4 acres
How many employees (not counting family members)?	6
Other facilities under common ownership (name and address): None	

Table 4: Livestock Waste Storage

Type of Storage	Storage Capacity	Type of Liner	Depth Markers Present	Last Time Waste was Removed	Amount of Waste Removed	Days of Storage
Earthen Storage Structure	11 million gallons	Clay liner	Yes	Fall 2013	11 million gallons	12 months
Stacked Solids	Land Application Field	NA	NA	Anytime fields are available	50 tons	NA

Records at site of storage structure design?	Yes
Is manure stored for the short term? **If yes, describe where it is stored, how it is drained and where it drains to.**	Yes, used bedding and manure from the Fresh Cow Barn was stockpiled on the east side of the Calf Barn on a concrete pad on the east side of production area Manure and used bedding was also stockpiled on the south berm of the Earthen Storage Structure
Are records kept of the level of manure in the storage structures?	The facility owner did not have the records available at the facility at the time of the inspection.
When was the last time a storage structure was emptied, either partially or completely?	Fall 2013
What amount of manure or process wastewater was removed the last time the storage structure was emptied, either partially or completely?	11 million gallons of liquid manure and process wastewater
Do the facility personnel inspect and keep records of all diversion devices?	Yes
Do the facility personnel inspect and keep records of all impoundments?	Yes
Do the facility personnel inspect and keep records of all the water lines?	Yes

Table 5: Livestock Waste Management

Describe the way manure is collected and disposed of at the facility:	
Manure in the Fresh Cow Barn was scraped and stored on the concrete pad on the east side of the Calf Barn that is attached to the Fresh Cow Barn. The area east of the Calf Barn was not an approved stacking area. The Freestall Barn is scraped and gravity fed into the Earthen Storage Structure.	
Describe the way used bedding is collected and disposed of at the facility:	
Sand goes into the Earthen Storage Structure and it is land applied.	
Are mortality records kept?	Yes
Describe the way mortalities are managed at the facility:	
OJ Crawl is the renderer that takes the mortalities from New Horizons.	
What type of method is used to provide drinking water for the animals?	Drinkers for the cows in the Freestall Stall Barn use a float system.
Describe the way spilled drinking water is collected and disposed of at the facility:	
Spilled drinking water flows with the manure and is collected in the same way as the manure, which gravity flows into the Earthen Storage Structure.	
Describe the way mist cooling water is collected and disposed of at the facility:	
The mist cooling system is only used in the Freestall Barn and flows with the manure and is collected in the same way as the manure in the Earthen Storage Structure.	
Describe how chemicals are stored and how used or spilled chemicals are collected and disposed of at the facility:	
There is a storage room near the Milking Parlor where the chemicals are kept, no documentation of whether there is a drain in the storage room.	
Describe the way water that has been used to wash/flush barns is collected and disposed of at the facility:	
The Milking Parlor wash water gravity flows into the Earthen Storage Structure along with manure and process wastewater from the Freestall Barn.	
Describe where water comes from that is used to clean and/or flush. (Wells, city, etc.)	
Plate cooler water used to cool down the milk is put into a separate tank and used to flush the bulk line tank and gray water tank and flush the Milking Parlor and holding areas where the cows wait before entering the Milking Parlor. The process wastewater gravity flows to the Earthen Storage Structure.	

Describe the way feed is contained and how runoff from feed is collected and disposed of at the facility:
Feed is contained in concrete bunkers on a concrete pad. Feed is also kept in different areas within the production area in feed bags. Feed in the bunkers is covered with plastic tarps and held down with tires. There is no containment for leachate from feed stored in the Silage Bunkers or any containment around the open feed bags of silage. On the east side of the Silage Bunkers, leachate from feed flows off the concrete pad and into the storm water pathway. The storm water pathway flows south into an unnamed intermittent tributary that flows to Apple Creek. Apple Creek, a perennial waterway and water of the U.S. flows east into the Fox River, a Traditional Navigable Water.
If a dairy, describe how process wastewater from the plate cooler water is collected and disposed of at the facility:
Plate cooler water is collected in a separate tank and then used to flush the Milking Parlor.
If a dairy, describe how process wastewater from the cleaning of the milking parlor is collected and disposed of at the facility:
The process wastewater from the Milking Parlor flows via gravity to the Earthen Storage Structure and is land applied.
If a dairy, describe how process wastewater from the cleaning of the milk tanks is disposed of at the facility:
Described above, plate cooler water is used to rinse the milk tanks and then the process wastewater gravity flows to the Earthen Storage Structure.

If a dairy, how many times per day are cows milked?	Cows are milked three times per day.

Table 6: Land Application and Disposal of Manure and Process Wastewater

Does the facility perform and keep records of the manure testing?	Yes
When was the last time a sample was taken of the manure and/or process wastewater?	During the fall of 2013
Describe the process to take the manure and/or process wastewater sample.	Manure is agitated and when being pumped a sample is taken as the truck is being filled or from faucet on the truck.
Number of acres available for land application:	2,240.80 spreadable acres, according to the January 1, 2012 NMP
Are land application records kept?	Yes
Who applies the manure and process wastewater to the fields?	Custom Applicator

Are weather conditions at time of application kept? (24 before – 24 after)	Unknown
Does the facility perform and keep records of the soil testing?	Yes
Is manure transferred off-site to another party?	Not in 2014. However, in 2012 there was an off-site transfer listed
Are manure transfer records maintained?	Yes
Do facility personnel perform periodic inspection of land application equipment?	Yes

Table 7: Receiving Surface Waters

Describe the surface flow pathways:	
Surface flow from New Horizons flows either to the west or to the east to Apple Creek, a perennial waterway. New Horizons also has flow to a seasonal storm water pathway to the south into an unnamed intermittent tributary. The unnamed intermittent tributary flows to the northeast into Apple Creek. Apple Creek, a perennial waterway, flows north and then east into the Fox River, a traditional navigable water.	
How many months out of the year is there flow in the nearest surface water pathway:	The seasonal storm water pathway may flow more than three months of the year, it was flowing at the time of EPA's inspection. The unnamed intermittent tributary flows more than three months of year to the northeast into Apple Creek, which is perennial waterway and a water of the U.S.
Are there any storm water pathways entering the facility?	Yes, there is storm water pathway that flows from the Rosin Road ditch west through the production area of New Horizons and then continues to the west side of the South Access Road through culverts flowing south of the production area into the unnamed intermittent tributary that flows northeast into Apple Creek.
Are there any clean water ponds on site?	No
What is the name of the first waterway that is identified as a Traditional Navigable Water (TNW) for surface flow from the facility?	Apple Creek is a perennial waterway and water of the U.S. that flows to the Fox River, which is Traditional Navigable Water.
Is the surface water pathway nearest to the facility considered to be ephemeral, intermittent or perennial?	Apple Creek is a perennial waterway nearest to the facility. The unnamed intermittent tributary is intermittent.

Has the surface water pathway nearest the facility been assessed for water quality?	Apple Creek has been assessed for water quality standards. Impairments include habitat alterations, organic enrichment/oxygen depletion, nutrients, sediment, and temperature

Table 8: Nutrient Management Plan

NMP on site?	Yes, but the 2013 records were not available.
Date NMP Submitted:	2007
Planner Name/Company:	Nathen Nysse, Polenske Crop Consulting
Date that the NMP was last updated:	January 2013
Storage Description:	Yes
Amount of Manure Generated:	11 million gallons
Capacity of Storage:	11 million gallons
Duration of Storage:	Approximately 12 months
Amount of Spreadable Land:	2,248.80
Mortality Management Plan:	Unknown – Did not see it during the records review of the NMP
Clean Water Diversion System:	Yes
Direct Contact Prevention Plan:	Yes
Chemical Management Plan:	Unknown – Did not see it during the records review of the NMP
Conservation Practices:	Yes
Manure Testing Protocols:	Yes
Soil Testing Protocols:	Yes
Land Application Protocols:	Yes
Additional NMP comments:	None
Does the NMP reflect the current operational characteristics?	No, the facility owner stated that the current documents were sent to his consultant to update the NMP.
Are the number of acres owned/leased consistent with what is listed in the NMP?	The facility owner confirmed the number to be correct

Table 9: Land Application Records (details of the records reviewed)
EPA observed land application records on-site, but the 2013 records were not available including manure tests.

Table 10: Facility Records (details of the records reviewed)

Diversion devices:	Yes, weekly inspections for diversion devices were available in the NMP
Impoundments:	Yes, the description of storage structures
Depth marker observations:	Yes, records of the levels within the Earthen Storage Structure were observed
Water Lines:	Yes, daily waterline records were observed
Mortality handling:	Yes, the NMP included mortality handling records
Storage Structure Design:	Yes, storage structure description was reviewed in the NMP
Overflow records:	No records of overflows

Crop Yields:	For past years, but not for 2013
Land Application Dates:	For past years, but not for 2013
Weather Conditions at time of application (24 before-24 after):	EPA did not review or see documentation of precipitation records within the NMP during the records review.
Test Methods for Manure Testing:	Yes, this process was described by New Horizons's crop advisor during the records review.
Test Methods for Soil Testing:	New Horizons 's crop advisor does composite sampling of the fields for land application
Manure Test Results:	No 2013 records were available at the time of the inspection.
Soil Test Results:	Yes, EPA observed these reports for 2011
Calculations of N and P applied:	When reviewing the NMP, EPA did not see any documents that showed the calculations used to determine N and P
Application Methods:	Injection and surface application with incorporation within 48 hours
Application Equipment Inspection Dates:	During the records review of the NMP, EPA did not review or see any documents that showed dates of the application equipment inspections

EPA observed some of the facility records during the inspection.

Table 11: NPDES Permit

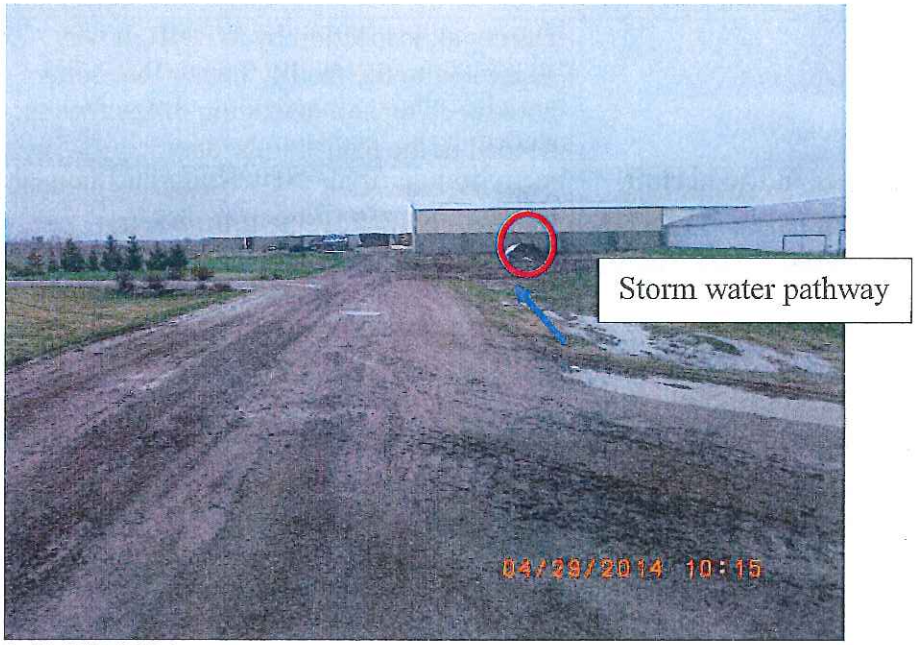
Type of permit (General, individual)	General
Is a copy of the permit on site?	Yes
Date that the permit was issued:	January 1, 2012
Date that the permit will expire:	December 31, 2016
Permitted number of animal units:	The NMP showed 735 milking and dry and 600 heifer/calves
Does the permit contain a compliance schedule? If yes, provide a detailed description of the requirements and the status.	Yes, pasture management plan due 3/1/2012 that was due on 3/1/2012 and had been submitted to WDNR Feed Storage – Engineering Evaluation due on 2/2/2012, 5/1/2012, 10/1/2012, 8/1/2013 – However, WDNR conducted an inspection and determined that the facility owner could comply by maintaining good housekeeping practices
Have there been any changes made to the production area since the permit was issued? If yes, provide a detailed description.	The pasture area was seeded and cows were kept out of the pasture area during winter and spring months until vegetation was established.

	During an inspection by WDNR, it was suggested to the facility owner that better housekeeping and managing of the feed is needed in the feed storage area.
Are there any practices in the permit that are not being done at the facility? (Records kept, inspections performed, etc.)	Feed Storage Area –New Horizons planned to install housekeeping practices to maintain the feed storage. EPA did not observe adequate housekeeping practices implemented during the EPA inspection.

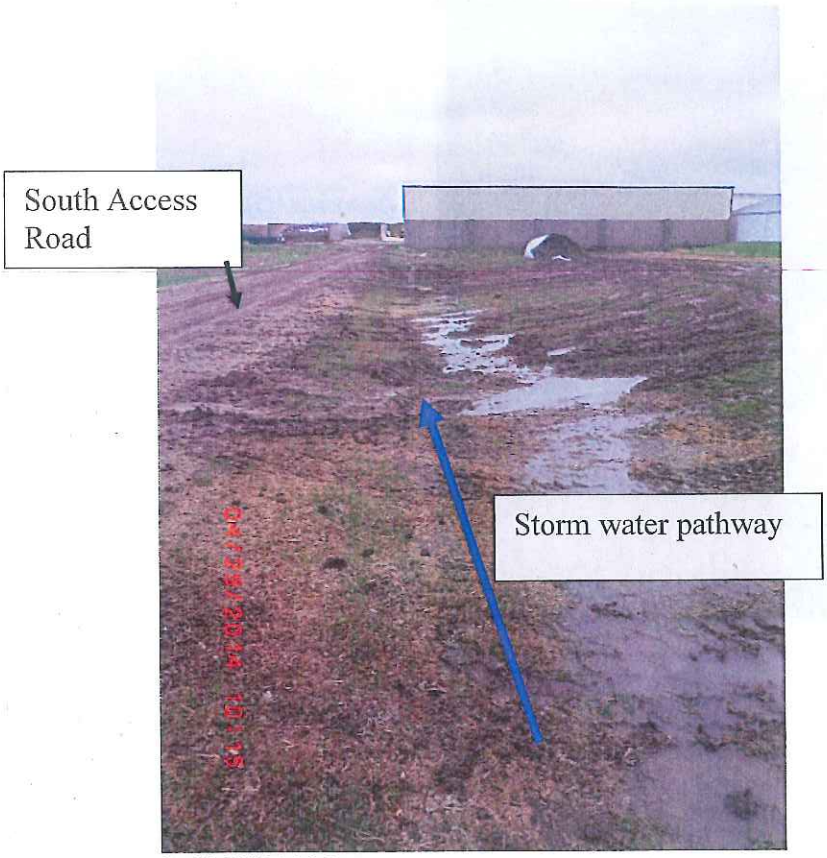
2.2 Walkthrough of the Facility

EPA started the walk-through of the facility at 9:45 AM. The facility owner stated he was not able to conduct a walk-through of the production area at that time, but granted permission to EPA and WDNR to conduct a walk-through without him. The facility owner stated that he would meet up with us later, and provided us with his cell phone number and EPA and WDNR provided cell phone numbers to him, so he could reach one of us when he was available.

EPA and WDNR started walking west on the South Access Road toward the Silage Bunkers. As we were walking west, EPA observed an open feed bag on the north side of the South Access Road and east of the Dry Feed Barn. At the time of the inspection, EPA observed that precipitation had come into contact with feed from the open feed bag. This area is designed to convey storm water flow to the south into a storm water pathway. The culverts are located to the west and to the south of the open feed bag. EPA observed process wastewater discharging through the culverts into the storm water pathway that flows to the southwest into a storm water pathway that discharges into an unnamed intermittent tributary to the south.



1: IMGP0194
Description: The red circle denotes the location of the open bag of feed. Storm water flows to the west as shown by the blue arrow in the photo.
Location: South Access Road
Camera Direction: West
Date/Time: April 29, 2014 at 10:15 AM



2: IMGP0195
Description: Storm water pathway. Blue arrow denotes the direction of flow. Open bag of feed is north of the South Access Road and east of Dry Feed Barn.
Location: South Access Road
Camera Direction: West
Date/Time: April 29, 2014 at 10:15 AM

3: IMGP0196
Description: The open bag of feed near the storm water pathway located north of the South Access Road and east of the Dry Feed Barn. The precipitation that comes into contact with the feed from the open bag flows to the west and to the south as denoted by the red arrows. Culverts transport storm water and at the time of the inspection process wastewater to the south into a storm water pathway that flows southwest past the Silage Bunker.
Location: South Access Road
Camera Direction: North
Date/Time: April 29, 2014 at 10:17 AM

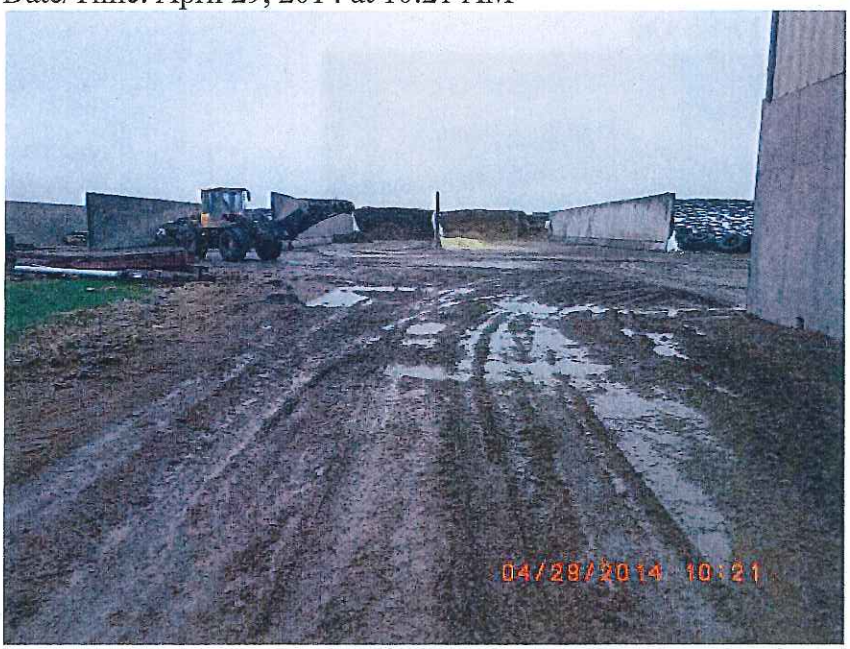
4: IMGP0197
Description: Culvert drains storm water and the process wastewater from the preciptation that came into contact with the feed from the open bag to the south underneath the South Access Road. Red arrow denotes the direction of flow of process wastewater discharging into the storm water pathway.
Location: North of South Access Road
Camera Direction: Northwest
Date/Time: April 29, 2014 at 10:17 AM

5: IMGP0198
Description: Culvert east of Dry Feed Barn drains storm water pathway to the south. The process wastewater from the open bag of feed flowed into this storm water pathway to the south. The blue arrow denotes direction of flow.
Location: North of South Access Road
Camera Direction: Down
Date/Time: April 29, 2014 at 10:18 AM

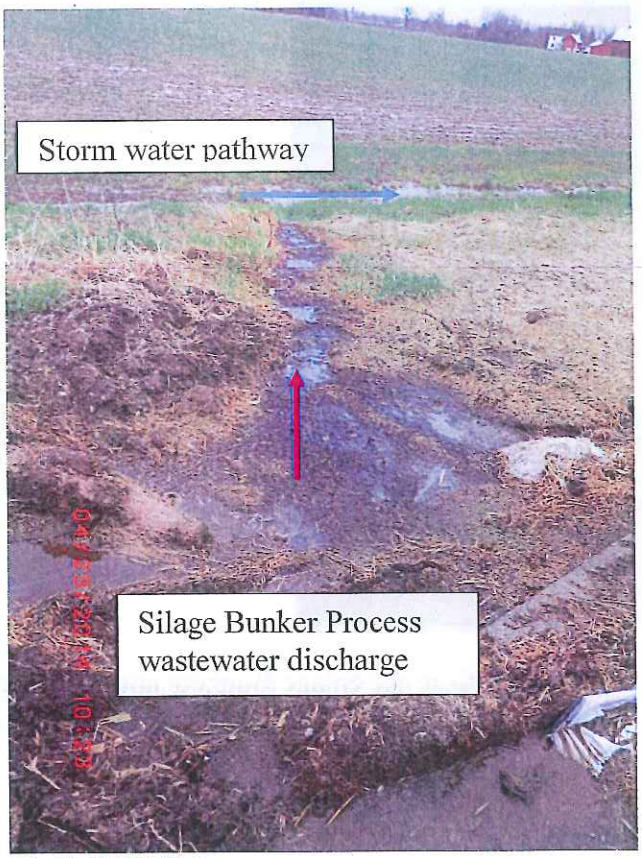
6: IMGP0199
Description: Storm water pathway that the culvert outlets conveys storm wate and at the time of inspection conveyed process wastewater from the open bag of feed on the north side of the South Access Road. Th blue arrow denotes the direction of flow.
Location: South side of South Access Road
Camera Direction: West
Date/Time: April 29, 2014 at 10:19 AM

7: IMGP0200
Description: Culvert outlet on the south side of South Access Road draining the storm water pathway on the north side of the South Access Road.
Location: Culvert outlet south of South Access Road.
Camera Direction: North
Date/Time: April 29, 2014 at 10:20 AM

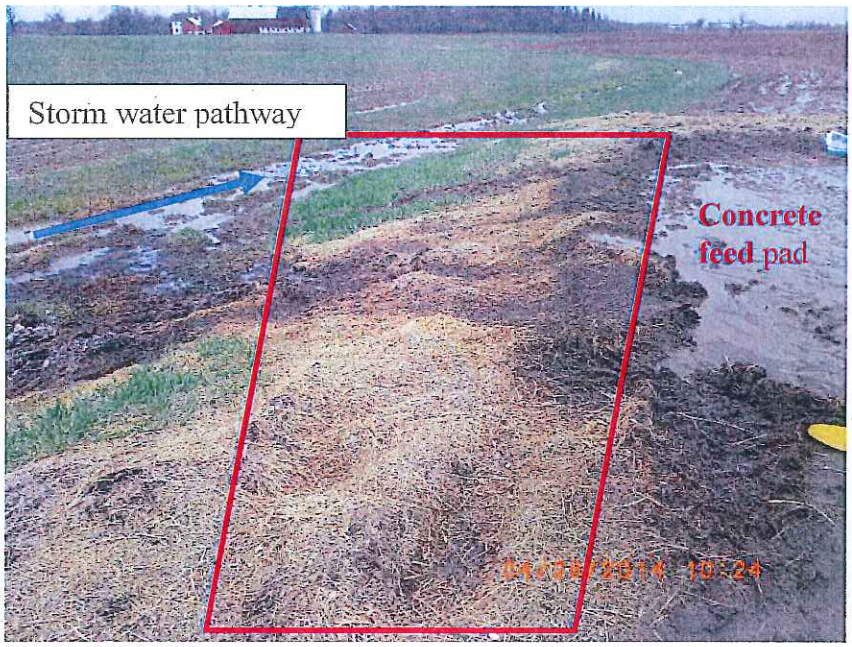
8: IMGP0203
Description: Storm water pathway located on the east side of Silage Bunkers and concrete pad continues to flow to the south into an unnamed intermittent tributary.
Location: South Access Road
Camera Direction: Southwest
Date/Time: April 29, 2014 at 10:21 AM



9: IMGP0204
Description: South Access Road facing Silage Bunkers
Location: South Access Road
Camera Direction: West
Date/Time: April 29, 2014 at 10:21 AM



10: IMGP0206
Description: Silage leachate runoff discharged into the storm water pathway. The blue arrow denotes the flow direction of the storm water pathway to the south. The red arrow denotes the discharge of process wastewater from the Silage Bunkers and concrete pad into the storm water pathway.
Location: Silage bunker pad
Camera Direction: East
Date/Time: April 29, 2014 at 10:23 AM



11: IMGP0209
Description: Silage leachate and feed is discharged from the Silage Bunkers and concrete pad into the storm water pathway. The brown material outlined in the red box is the feed.
Location: Silage Bunker pad
Camera Direction: South
Date/Time: April 29, 2014 at 10:24 AM

12: IMGP0211
Description: Channels of process wastewater and feed from the Silage Bunkers and concrete pad discharged into the storm water pathway.
Location: Silage Bunker Pad
Camera Direction: East
Date/Time: April 29, 2014 at 10:25 AM

13: IMGP0210
Description: Silage leachate and feed discharged into the storm water pathway from the Silage Bunkers and concrete pad.
Location: Silage Bunker Pad
Camera Direction: East
Date/Time: April 29, 2014 at 10:24 AM

EPA then walked around the Silage Bunkers to south and then to the west and observed spilled feed along the west side of the Silage Bunkers. EPA continued to walk along the west side of the Silage Bunkers to the north, no additional spilled feed was observed. However, EPA did observe cracks in the wall of the Silage Bunkers.

14: IMGP0214
Description: South side of Silage Bunker with some spilled feed from the Silage Bunker denoted by the red circle.
Location: South side of Silage Bunker.
Camera Direction: Northwest
Date/Time: April 29, 2014 at 10:34 AM

15: IMGP0215
Description: Crack in the Silage Bunkers wall.
Location: West side of the Silage Bunkers
Camera Direction: Northeast
Date/Time: April 29, 2014 at 10:35 AM

EPA turned to the east to observe the condition between the Freestall Barn and the Silage Bunkers. Clean sand was stored outside the Freestall barn doors on the south side of the Freestall Barn.

16: IMGP0216
Description: Freestall barn and northwest corner of Silage Bunkers.
Location: Northwest corner of Silage Bunkers.
Camera Direction: North
Date/Time: April 29, 2014 at 10:36 AM

17: IMGP0217
Description: Between the Freestall Barn and Silage Bunkers. Clean sand stored outside the Freestall Barn door.
Location: Between Freestall Barn and Silage Bunkers
Camera Direction: East
Date/Time: April 29, 2014 at 10:37 AM

EPA continued walking along the Center Access Road toward the Dry Feed Barn and Machine Shed. EPA observed that the flow along the Center Access Road between the buildings flows to the south to the storm water pathway located east of the Silage Bunkers. EPA also observed that feed was spilled on the concrete pad of the Silage Bunkers.

18: IMGP0219
Description: Between Dry Feed Barn and Silage Bunkers feed was spilled on the concrete pad.
Location: Northeast corner of Silage Bunker
Camera Direction: South
Date/Time: April 29, 2014 at 10:41 AM

19: IMGP0220
Description: Dry Feed Barn.
Location: Access road between the Dry Feed Barn and the Silage Bunkers
Camera Direction: Southeast
Date/Time: April 29, 2014 at 10:41 AM

EPA observed vehicle ruts through-out the production area and on the vegetated areas between the Freestall Barn and the Milking Parlor area.

20: IMGP0223
Description: Vegetation torn up from vehicle traffic.
Location: Access Road at northeast corner of Silage Bunkers
Camera Direction: North
Date/Time: April 29, 2014 at 10:42 AM

EPA then walked back the same way they had come between the Silage Bunkers and the Freestall Barn, so that they could observe the areas on the west side of the Freestall Barn and to the Northwest toward the Earthen Storage Structure.

21: IMGP0225
Description: West side of Freestall Barn.
Location: West side of Freestall Barn
Camera Direction: North
Date/Time: April 29, 2014 at 10:44 AM

22: IMGP0227
Description: Earthen Storage Structure.
Location: Southeast corner of Earthen Storage Structure
Camera Direction: North
Date/Time: April 29, 2014 at 10:50 AM

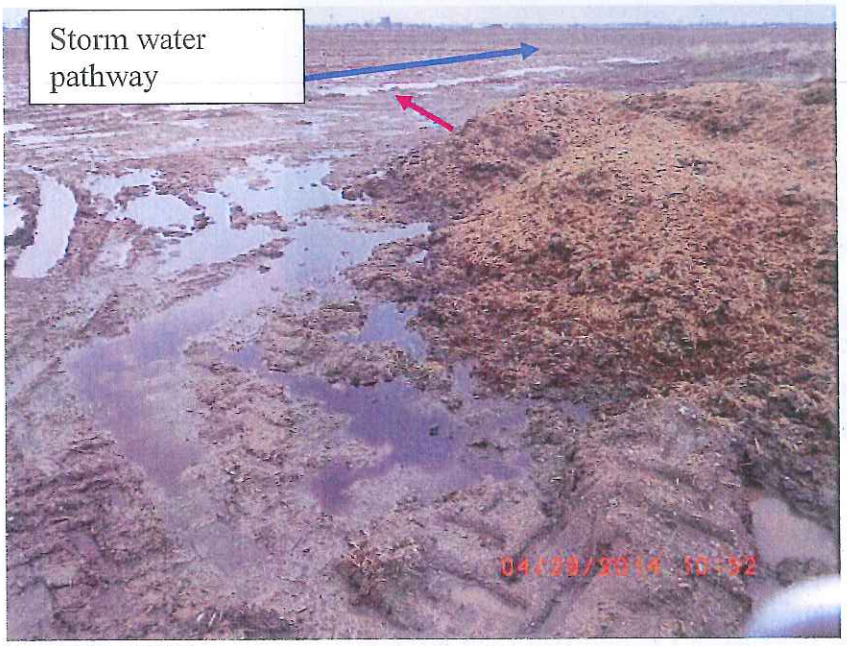
EPA observed process wastewater from the used bedding and manure stockpiled on the south side of the Earthen Storage Structure discharging into the storm water pathway to the south. EPA also observed placentas on the inner bank of the southeast corner of the Earthen Storage Structure.

23: IMGP0228
Description: Used bedding and feed on the south side of Earthen Storage Structure.
Location: South side of Earthen Storage Structure
Camera Direction: Northwest
Date/Time: April 29, 2014 at 10:50 AM

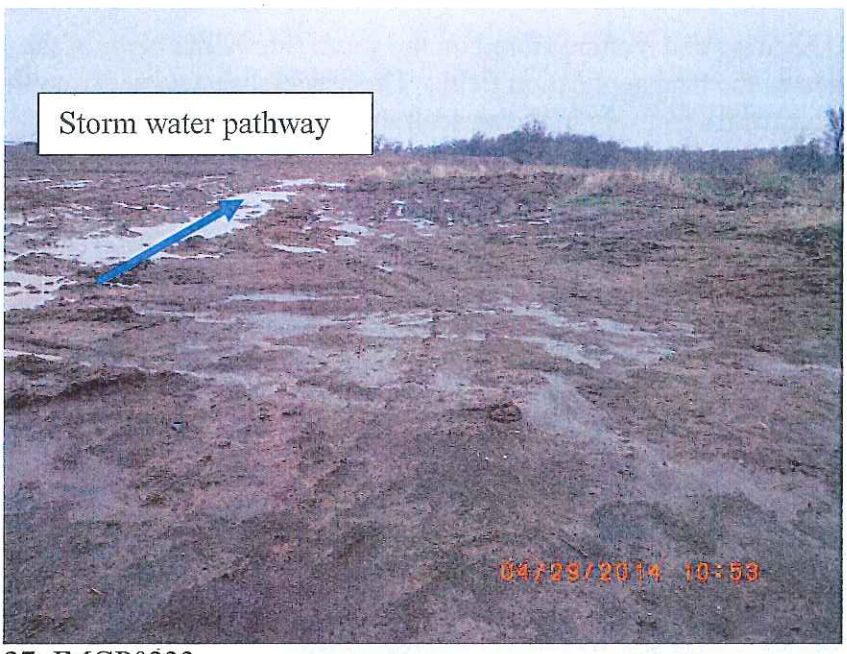
24: IMGP0229
Description: Manure and placentas on the inside berm of the Earthen Storage Structure.
Location: Southeast corner of the Earthen Storage Structure
Camera Direction: Northwest
Date/Time: April 29, 2014 at 10:51 AM

25: IMGP0230
Description: Manure and used feed/bedding on the south side of the Earthen Storage Structure.
Location: South side of the Earthen Storage Structure
Camera Direction: West
Date/Time: April 29, 2014 at 10:51 AM

The stockpiling of used bedding and manure stored on the south side of the berm of the Earthen Storage Structure in the land application field.. The process wastewater from the pile discharged into a stormwater pathway in the agricultural field that flowed toward Apple Creek.



26: IMGP0231
Description: Used bedding and manure in the rivets made by vehicles discharging into the storm water pathway that flows into Apple Creek to the northwest.
Location: South side of the Earthen Storage Structure
Camera Direction: West
Date/Time: April 29, 2014 at 10:52 AM



27: IMGP0233
Description: From documents provided in New Horizons NMP, EPA has determined that the land application field is K-L. The land application field K-L has a storm water pathway that flows to the northwest into Apple Creek as denoted by the blue arrow in the photo above.
Location: South side of the Earthen Manure Storage Structure
Camera Direction: West
Date/Time: April 29, 2014 at 10:53 AM

28: IMGP0234
Description: Freeboard Marker in the Earthen Storage Structure.
Location: Southeast corner of Earthen Storage Structure
Camera Direction: North
Date/Time: April 29, 2014 at 10:55 AM

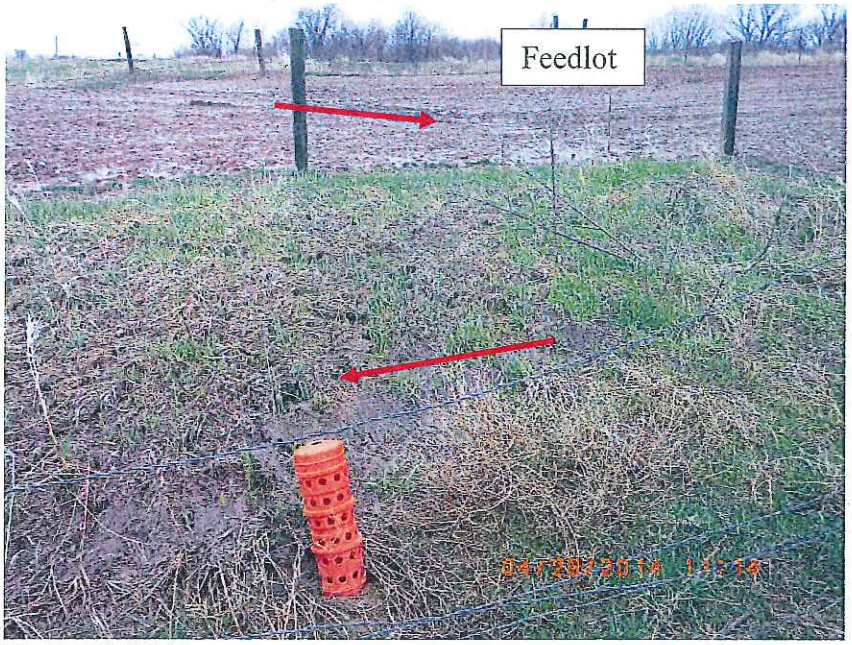
29: IMGP0236
Description: Debris along the bank of Apple Creek.
Location: Southwest side of the Earthen Storage Structure and top of bank of Apple Creek
Camera Direction: Down
Date/Time: April 29, 2014 at 10:59 AM

30: IMGP0238
Description: Storm water pathway through the land application field K-L, which created an erosional channel down the bank to Apple Creek.
Location: Southwest side of Earthen Storage Structure
Camera Direction: Northwest
Date/Time: April 29, 2014 at 11:00 AM

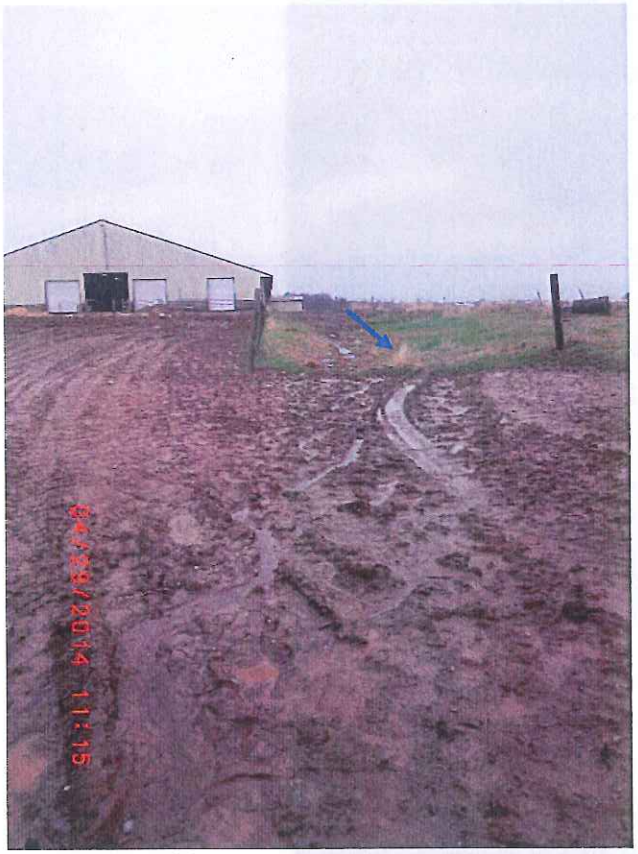
EPA walked along the west side of the Earthen Storage Structure through a gate into the pasture. The facility owner was seeding the pasture, so there were no cows out on pasture during the inspection. Denuded areas along the bank of Apple Creek.

31: IMGP0240
Description: Pasture area on the west side of Earthen Storage Structure east of Apple Creek,which is denuded along the bank of Apple Creek.
Location: West of Manure Storage Structure and East of Waterway
Camera Direction: South
Date/Time: April 29, 2014 at 11:10 AM

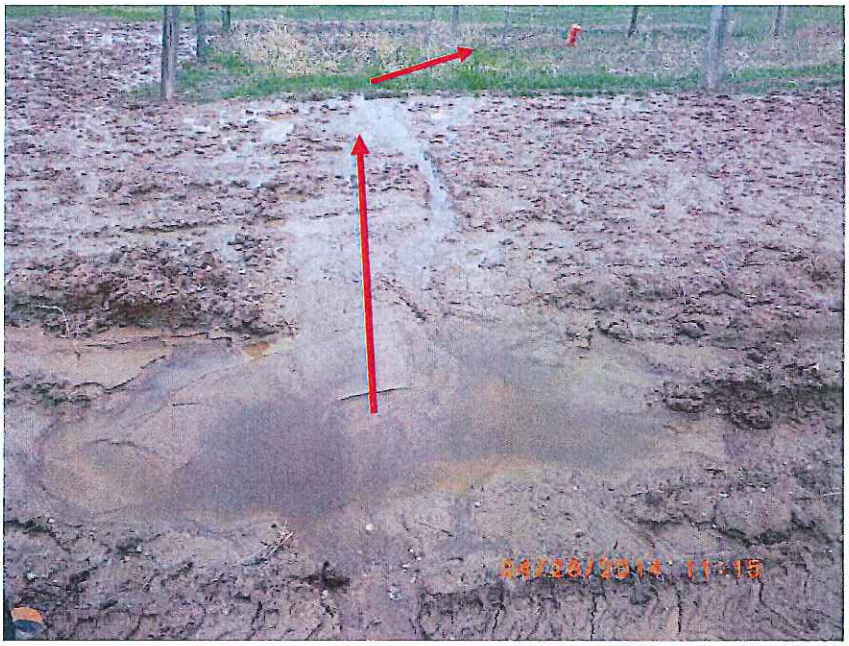
As EPA was walking through the pasture behind the feedlot north of the Freestall Barn, EPA observed a tile inlet. The tile was fenced in, so the cows could not denude the area around it. However, south of the tile was a feedlot north of the Freestall Barn. EPA observed runoff from the feedlot flowing toward the tile inlet. EPA continued walking through the pasture to find safe access down the embankment to Apple Creek to try and find where the tile outlets. EPA walked the bank of Apple Creek and found a tile outlet on the northwest side of Apple Creek. EPA did not sample the tile outlet because they did not have proper gear to wade in Apple Creek and observe if the tile was discharging.



32: IMGP0243
Description: The tile inlet north of the Feedlot and north of Freestall Barn.
Location: North of Feedlot off of the Freestall Barn
Camera Direction: South
Date/Time: April 29, 2014 at 11:14 AM



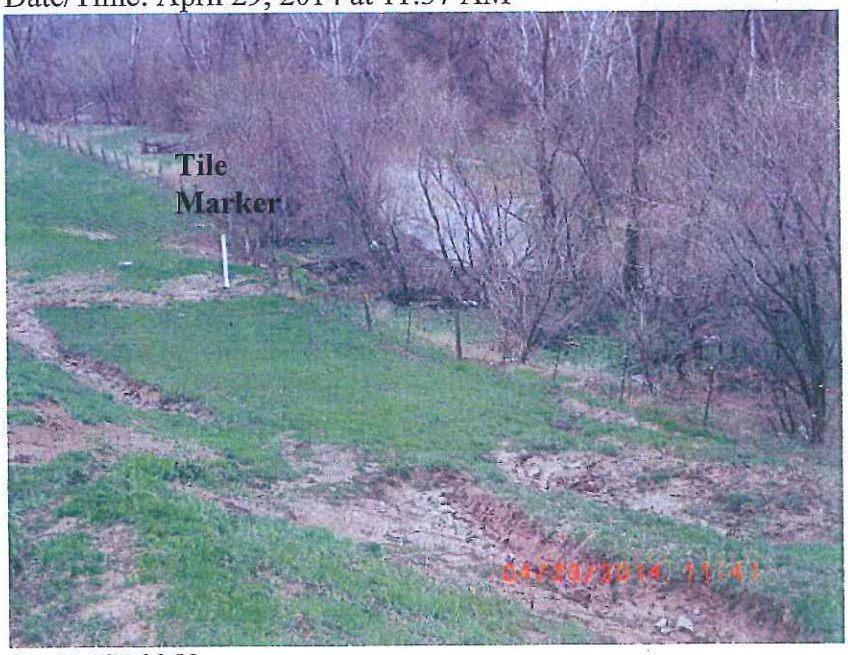
33: IMGP0244
Description: West of Freestall Barn and south of the Feedlot is a storm water pathway. denoted by the blue arrow that conveys storm water through the Feedlot.
Location: North of Feedlot connected to Freestall Barn
Camera Direction: South
Date/Time: April 29, 2014 at 11:15 AM



34: IMGP0246
Description: The red arrows denote process wastewater discharing from the Feedlot. runoff flowing off Feedlot toward the tile inlet.
Location: North of Freestall Barn south south Feedlot
Camera Direction: North
Date/Time: April 29, 2014 at11:15 AM

35: IMGP0247
Description: The tile outlet that discharge from the pasture, but not sure of the what tile inlet is connected to this tile outlet.
Location: Directly North of Heifer Barn.
Camera Direction: Down
Date/Time: April 29, 2014 at 11:37 AM

36: IMGP0248
Description: Apple Creek – Yellow arrow denotes the tile outlet from the tile within the pasture into Apple Creek.
Location: North of Heifer Barn.
Camera Direction: West
Date/Time: April 29, 2014 at 11:37 AM



37: IMGP0252
Description: Channeled flow from the Heifer Barn toward tile marker and Apple Creek.
Location: North of Freestall barn and Calf Barn
Camera Direction: North
Date/Time: April 29, 2014 at 11:41 AM

38: IMGP0253
Description: Looking upstream at Apple Creek.
Location: North side of the production area north of Heifer Barn
Camera Direction: West
Date/Time: April 29, 2014 at 11:44 AM

EPA continued the walk-through up the berm of Apple Creek toward the Heifer Barn and the Calf Barn. The Calf Barn had a concrete pad on the east side that was being used to stockpile used bedding and manure. The concrete pad had a concrete berm on the east side of it, but the concrete pad was full of process wastewater and at the brink of overflowing the berm and discharging into Apple Creek.

EPA walked along the edge of the concrete pad to get to the other side to get down to Apple Creek to observe if the process wastewater had overflowed the berm and was discharging into Apple Creek. EPA oberved more bags of feed on the east side of the production area. The feed was contained to the area around the bags and no leachate from the feed was flowing toward Apple Creek, at the time of the inspection. EPA walked down to Apple Creek to observe the bank to look for runoff from the concrete pad off the east side of the Heifer Barn. EPA did not observe any runoff into the Apple Creek at the time of the inspection. However, according to WDNR this was not an approved stacking site.

39: IMGP0254
Description: Used bedding and manure stockpiled on the concrete pad on the east side of the Calf Barn.
Location: North of the concrete pad located east of the Calf Barn
Camera Direction: South
Date/Time: April 29, 2014 at 11:45 AM

40: IMGP0257
Description: Used bedding and manure that was stockpiled on the concrete pad mixed with storm water.
Location: East of Calf Barn
Camera Direction: East
Date/Time: April 29, 2014 at 11:46 AM

41: IMGP0258
Description: Process wastewater from the used bedding and manure.
Location: East of the Calf Barn
Camera Direction: East
Date/Time: April 29, 2014 at 11:47 AM

42: IMGP0259
Description: Used bedding and manure stockpiled on the concrete pad east of the Calf Barn mixed with storm water.
Location: East of the Calf Barn
Camera Direction: North
Date/Time: April 29, 2014 at 11:48 AM

43: IMGP0260
Description: Debris on the bank of Apple Creek on the east side of the Calf Barn. The red arrow denotes the channel where runoff from the concrete pad overflows down the bank to Apple Creek.
Location: East side of the concrete pad where used bedding and manure was stockpiled
Camera Direction: Down
Date/Time: April 29, 2014 at 11:48 AM

44: IMGP0262
Description: Used bedding over the edge of the concrete pad on the east side of the Calf Barn.
Location: East side of the Calf Barn
Camera Direction: Down
Date/Time: April 29, 2014 at 11:49 AM

45: IMGP0264
Description: Bagged feed stored on the southeast side of the production area.
Location: Southeast of the Fresh Cow Barn
Camera Direction: Southeast
Date/Time: April 29, 2014 at 11:52 AM

46: IMGP0273
Description: Runoff of manure mixed with storm water near the Fresh Cow Barn.
Location: Southwest of East Access Road
Camera Direction: North
Date/Time: April 29, 2014 at 12:16 PM

EPA met up with the facility owner and rewalked some of the production area: EPA observed manure mixed with storm water flowing toward the storm water pathway from under the Fresh Cow Barn. The facility owner stated that the manure must of spilled while cleaning out the Fresh Cow Barn because the area under the Fresh Cow Barn was conveyance for clean storm water. EPA asked the facility owner how the tile lines in the pasture were connected and which tile inlet was connected to what tile outlet in Apple Creek; the facility owner stated that he was not sure.

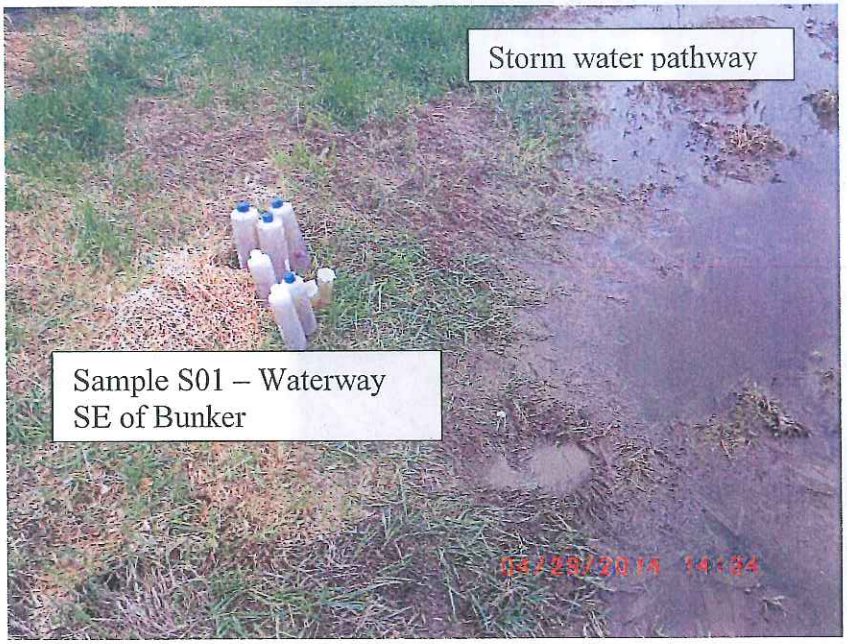
47: IMGP0274
Description: Manure mixed with storm water flowed from under Fresh Cow Barn to the storm water pathway
Location: East Access Road
Camera Direction: Down
Date/Time: April 29, 2014 at 12:16 PM

48: IMGP0275
Description: Manure and feed mixed with storm water flowing toward the storm water pathway coming from the Fresh Cow Barn, as denoted by the red arrow.
Location: East Access Road
Camera Direction: East
Date/Time: April 29, 2014 at 12:17 PM

After the walk-through, EPA conducted the records review. The faciliy owner had his NMP on-site and his crop advisor showed up at this time. As EPA was reviewing the NMP, no documents were availble for 2013. The crop advisor explained that the 2013 records were being used to update the NMP and were not on-site. After the records review, EPA explained that they were going to take samples within the Storm Water pathway east of the Silage Bunkers.

EPA explained the purpose for collecting the samples within the Storm Water pathway was to determine if pollutants from the Silage Bunkers and other sources documented in the inspection report were discharging into the Storm Water pathway that flowed into the unnamed intermittent tributary, which flowed into Apple Creek. EPA asked the facility owner if he wanted to split samples, which he had stated that he would.

After EPA collected the samples, EPA conducted the exit briefing at EPA's vehicle then proceeded to preserve the samples.



49: IMGP0295
Description: The collection of the samples labeled -Sample S01 – Waterway SE of Bunker.
Location: Northwest side of the Storm water pathway Southeast of Silage Bunker
Camera Direction: Down
Date/Time: April 29, 2014 at 2:34 PM

50: IMGP0296
Description: The same as above the collected samples labeled -Sample S01 –Waterway SE of Bunker.
Location: Northwest side of storm water pathway southeast of Silage Bunker
Camera Direction: East
Date/Time: April 29, 2014 at 2:34 PM

51: IMGP0297
Description: Close-up of samples labeled - S01 called- Waterway SE of Bunker.
Location: Northwest side of the storm water pathway southeast of Silage Bunker
Camera Direction: Down
Date/Time: April 29, 2014 at 2:34 PM

After EPA preserved the samples, EPA drove their vehicle down Rosin Road and parked to photograph the upstream and downstream flow of the unnamed intermittent tributary that the storm water pathway southeast of the Silage Bunkers was flowing into.

52: IMGP0299
Description: Close-up of the culvert inlet of Unnamed Intermitent Tributary
Location: West side of Rosin Road
Camera Direction: West
Date/Time: April 29, 2014 at 2:58 PM

53: IMGP0301
Description: Culvert outlet of Unnamed Intermittent Tributary
Location: East side of the Rosin Road
Camera Direction: Down
Date/Time: April 29, 2014 at 2:58 pm

54: IMGP0303
Description: Close-up of culvert outlet of Unnamed Intermittent Tributary
Location: East side of Rosin Road
Camera Direction: East
Date/Time: April 29, 2014 at 2:59 PM

2.3 Closing Conference and Post-Inspection

Table 12: Post Walk-Through

Were specific "Potential Violations" discussed with facility personnel?	Yes
Were specific "Areas of Concern" discussed with facility personnel?	Yes
Who were the Potential Violations or Areas of Concern discussed with?	The Facility Owner
Compliance assistance materials given to facility personnel:	
Concentrated Animal Feeding Operations Final Rulemaking – Fact Sheet	
U.S. EPA Small Business Resources Information Sheet	
NRCS Most Common Conservation Practices for Confined Livestock Fact Sheet	
Environmental Quality Incentives Program (EQIP) Brochure	
Exit Time:	3:00 PM
Disposable Boots Left at Facility?	Yes
Vehicle Washed after leaving facility?	Yes
Date and Time that vehicle was washed:	April 30, 2014 approximately 5:00 PM

Table 13: Waterway Documentation

List the pathway taken by EPA inspectors to document the waterway at the facility.
EPA inspectors photographed the storm water pathways within the production area and upstream and downstream flow of the unnamed intermittent tributary that the storm water pathway flowed south into. EPA also photographed upstream and downstream of the Apple Creek where the unnamed intermittent tributary flowed into it.

Table 14a: Sampling Information

Were samples taken?	Yes
Were samples split with facility?	Yes
Number of samples taken?	1
Was a trip blank created?	Yes
Identify which sample is the trip blank.	B01
Were field duplicate samples taken (1 duplicate per 20 samples)?	No, duplicate was taken
Identify which sample(s) is/are the field duplicate(s)	No duplicate was taken
Were equipment blanks taken (if more than one type of equipment was used to collect samples)?	No
Identify which samples were equipment blanks.	N/A
List chain of custody for fecal coliform samples:	EPA to Pace Laboratory in Green Bay, WI on 4/29/14 at 3:30 PM
List chain of custody for nutrient and general chemistry samples:	EPA to Region 5 CRL on 5/1/14 at 8:50 AM
Location where samples were preserved:	New Horizons LLC at the EPA vehicle
Name of people involved with sample preservation:	Cheryl Burdett and Ben Atkinson
Time of sample preservation:	Approximately 2:45 PM
Were samples shipped to a lab?	No
Weather conditions at the time of sample collection:	60°F and windy
Camera name and type used to photograph sample collection:	Pentax Optio WG-1 GPS

Table 14b: Facility Sample Information

Number	Name	Location	Date	Time	Collector	Color	Photo #(s)	Photographer	Method of Collection	Amount of Sulfuric Acid
S01	Waterway SE of bunker	Southeast of Silage Bunker	4/29/14	2:30 PM	BA	Brown	IMGP2095 IMGP2096 IMGP2097	CB	Grab	20 drops
BO1	New Horizons	Gas Station	4/30/14	3:27 PM	CB	Clear	No photos	NA	Grab	20 drops

Table 15: Sample Results

Sample ID	Sample Description (all liquid samples unless otherwise noted)	Biochemical Oxygen Demand (mg/L)	Total Kjeldahl Nitrogen (mg/L)	Nitrate-Nitrite N (mg/L)	Ammonia as N (mg/L)	Total Phosphorus (mg/L)	Total Dissolved Solids (mg/L)	Total Suspended Solids (mg/L)	Fecal Coliform (CFU/100ml)
	Typical limits			*0.1**		*.075****			*200***
S01	Liquid	1800	154	U	66.5	37.7	2800	133	270,000
B01	Liquid	U	U	U	U	U	U	U	NA

U = Not Detected

In Wisconsin, there are no Water Quality Standards for Biochemical Oxygen Demand, Total Kjeldahl Nitrogen, Nitrate-Nitrite, Ammonia as Nitrogen, Total Dissolved Solids and Total Suspended Solids but a limit for Nitrate-Nitrite is provided and is meant to be a benchmark for comparison only.

* Maximum Nitrate-Nitrite amount for aquatic life (North Carolina State University Water Quality Group)

**Maximum Total Phosphorus limit for all other unidirectional streams/rivers not listed in Chapter NR 102.6 (3) (a) of Wisconsin Administrative Code.

***Although there are no effluent limits for CAFOs, the limit in Wisconsin for Fecal Coliform in a stream for general use is 200 colonies/100ml. (Chapter NR 102, Water Quality Standards for Wisconsin Surface Waters, November 2010 of the Wisconsin Administrative Code.)

- The Fecal Coliform results were analyzed by Pace Analytical Services, Inc., 1241 Bellevue Street, Suite 9, Green Bay, WI 54302.
- Ammonia Nitrogen, Total Phosphorus, Nitrate-Nitrite, Dissolved Solids (TDS), Total Suspended Solids (TSS), Total Kjeldahl Nitrogen (TKN), and Biochemical Oxygen Demand (BOD) were analyzed by the Region 5 Chicago Regional Laboratory.

3. POTENTIAL VIOLATIONS

New Horizons Dairy must be in compliance with WPDES Permit WI-0063428-02-0:

1. EPA observed process wastewater discharging from the Silage Bunkers and the concrete pad into the storm water pathway that flows south into an unnamed intermittent tributary that flows northeast into Apple Creek. Sections 1.1 and 1.3
2. EPA observed process wastewater discharging from around the open feed bag located east of the Dry Feed Barn and north of the South Access Road through the culverts into the storm water pathway that flows south into an unnamed intermittent tributary that flows northeast into Apple Creek. Sections 1.1 and 1.3
3. EPA observed process wastewater discharging from the stacked pile of manure and used bedding located on the south side of the Earthen Storage Structure into the storm water pathway that was flowing northwest toward Apple Creek. Section 1.1 and 1.3
4. EPA observed process wastewater on the concrete pad east of the Calf Barn attached to the Fresh Cow Barn. The process wastewater could overflow the concrete berm and flow down the embankment on east side of the facility discharging into Apple Creek because the pad was not designed, operated, and maintained to store process wastewater for storm event greater than the 25-year/ 24 hour storm event. Section 1.1 and 1.3
5. EPA observed process wastewater from the feedlot on the north side of the Freestall Barn flowing toward the tile inlet that outlets to Apple Creek. Section 1.1 and 1.3.

4. AREAS OF CONCERN

EPA observed these areas of concern whereby pollutants have the potential to reach waters of the United States:

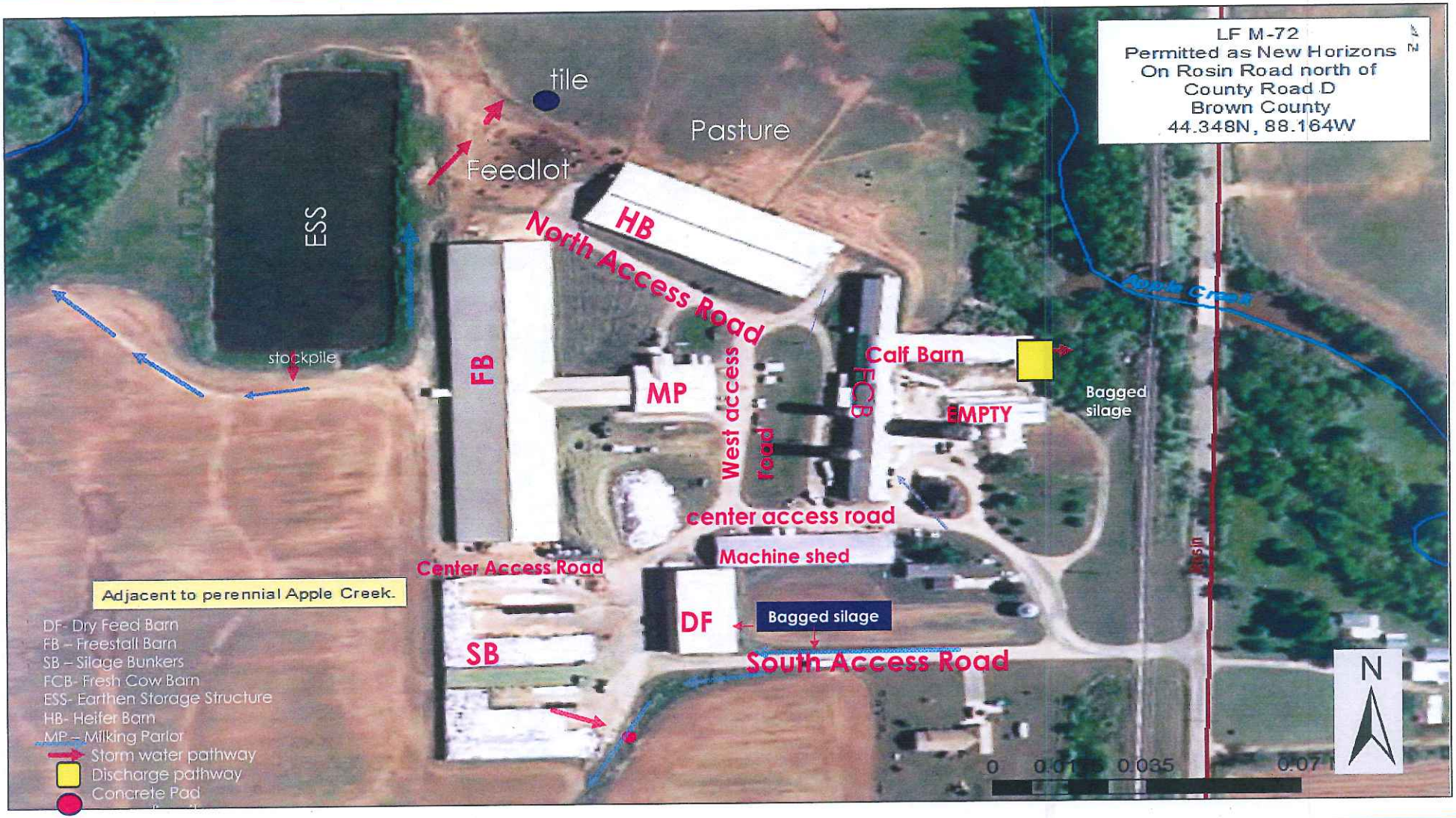
1. Manure near and under Fresh Cow Barn was flowing toward the storm water pathway.
2. Inspections for land application equipment were not in the NMP that EPA reviewed at the time of the inspection. Section 1.7.1
3. The 2013 land application records or manure analyses were not available at the time of the inspection. Section 1.7.1

5. LIST OF ATTACHMENTS

A) Aerial photograph of New Horizons Farm with buildings, waterways, sample locations and runoff pathways labeled.
B) Aerial photograph of waterways
C) Aerial with location of photographs
D) Sample analysis reports.

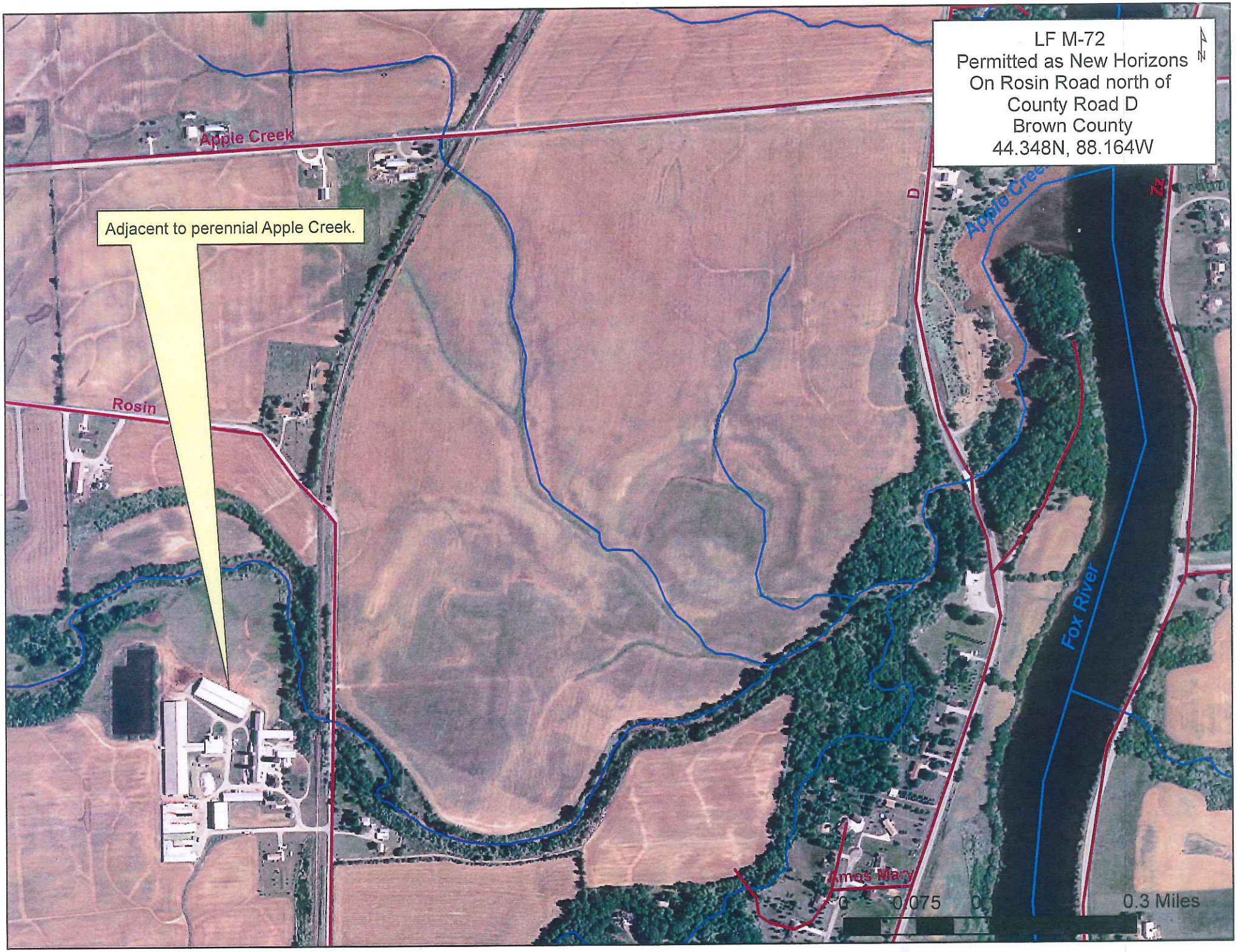
ATTACHMENT A

LABELED AERIAL PHOTOGRAPH OF NEW HORIZONS DAIRY, LLC


LF M-72
Permitted as New Horizons
On Rosin Road north of
County Road D
Brown County
44.348N, 88.164W
tile
Pasture
Feedlot
ESS
HB
North Access Road
stockpile
FB
MP
West access road
FCB
Calf Barn
EMPTY
Bagged silage
center access road
Machine shed
Center Access Road
DF
Bagged silage
SB
South Access Road
Adjacent to perennial Apple Creek.
DF- Dry Feed Barn
FB – Freestall Barn
SB – Silage Bunkers
FCB- Fresh Cow Barn
ESS- Earthen Storage Structure
HB- Heifer Barn
MP – Milking Parlor
Storm water pathway
Discharge pathway
Concrete Pad
N
0
0.035

ATTACHMENT B

AERIAL PHOTOGRAPH OF WATERWAYS AROUND NEW HORIZONS DAIRY, LLC


LF M-72
Permitted as New Horizons
On Rosin Road north of
County Road D
Brown County
44.348N, 88.164W
Adjacent to perennial Apple Creek.
Apple Creek
Rosin
D
Fox River
0.3 Miles

ATTACHMENT C

AERIAL PHOTOGRAPH OF GIS POINTS OF WHERE PHOTOGRAPHS WERE TAKEN AT

NEW HORIZONS DAIRY, LLC


New Horizons Dairy
Apple Creek
Legend
photos2
World Boundaries and Places
World Imagery
Low Resolution 15m Imagery
High Resolution 60cm Imagery
High Resolution 30cm Imagery
N
Copyright© 2013 Esri, DeLorme, NAVTEQ, TomTom, Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

ATTACHMENT D

SAMPLE ANALYSES

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGIO[illegible]
77 West Jackson B[illegible]
Chicago, Illinois 60[illegible]

Activity Code:

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
02082014	New Horizon Dairy, LLC

SAMPLERS: *(Print Name and Sign)*

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CON-TAINERS	Analyte: BOD, TDS, TSS	Ammonia	TKN, TP	Nitrate-Nitrite			TAG NUMBERS
S01	4/29/14	2:30pm		X	Waterways E of Bunker	1	X						~~20 drops~~, CB 5/1/14
S01	4/29/14	2:30pm		X	Waterways E of Bunker	1		X	X	X			20 drops
B01	4/30/14	3:27pm		X	New Horizon	1	X						
B01	4/30/14	3:27pm		X	New Horizon	1		X	X	X			20 drop

Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*		Ship To:
[signature]	5/1/14 8:50am			

Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*		ATTN:

Relinquished by: *(Signature)*	Date / Time	Received for Laboratory by: *(Signature)*	Date / Time	Airbill Number
		[signature]	[illegible] 0850	Chain of Custody Seal Numbers

Distribution: White - Accompanies Shipment; Pink - Coordinator Field Files; Yellow - Laboratory File

5-50103

…MENTAL PROTECTION AGENCY
Office of Enforcement

REGION 5
77 West Jackson Boulevard
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

Activity Code:

PROJ. NO.	PROJECT NAME	NO. OF CON-TAINERS	Analyte:
03CR2014	[illegible] LLC		[illegible]

SAMPLERS: (Print Name and Sign) [illegible]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CON-TAINERS	Analyte: [illegible]						TAG NUMBERS
[illegible]	[illegible]	[illegible]		X	[illegible]	1	X						[illegible]

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time
[signature]	1/29/14 330 pm	[signature]	1/29/14 1330
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time

Ship To:

ATTN:

Airbill Number

Chain of Custody Seal Numbers

Distribution: White - Accompanies Shipment; Pink - Coordinator Field Files; Yellow - Laboratory File

5-27453

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CHICAGO REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

LABORATORY ACCREDITATION BUREAU
ACCREDITED ISO/IEC 17025
Certificate # L2280 Testing

Date: 6/6/2014

Subject: Review of Region 5 Data for New Horizon Dairy, LLC

From: Francis Awanya, Group Lead FA-E
Region 5 Chicago Regional Laboratory

To: Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604

The data being transmitted under this cover memo successfully passed CRL's internal data review procedures as documented in our current Quality Management Plan (QMP) and appropriate Standard Operating Procedures (SOPs). Please be aware that CRL does not perform data validation which is based on your data quality objectives. This function must be performed independently of the laboratory generating the data.

Results in this report represent only the samples analyzed.

Please have the U.S. EPA Project Manager/Officer call the CRL Sample Coordinator at (312) 353-0375 for any comments or questions.

Attached are Results for: New Horizon Dairy, LLC

_____ / / _____

Data Management Coordinator and Date Received

Date Transmitted: ____/____/_____

Analyses included in this report:

BOD

Environmental Protection Agency Region 5
Chicago Regional Laboratory
536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: New Horizon Dairy, LLC	
77 West Jackson Boulevard	Project Number: 02CB2014	Reported:
Chicago IL, 60604	Project Manager: Cheryl Burdett	Jun-06-14 11:25

Analysis Case Narrative

General Information

Two (2) water samples collected for the project were received at the Chicago Regional Laboratory (CRL) on 05/01/2014. The designated analyst for those samples is Francis Awanya. Francis can be reached at 312-886-3682. Other pertinent information and dates are provided in the final analysis report.

Supporting data archived with Work Order Number 1405001.

Sample Analysis and Results

The samples were analyzed for 5 day Biochemical Oxygen Demand (BOD) following CRL Standard Operating Procedure (CRL.SOP) AIG0006 Revision No: 4.0 (Standard Method 5210 B) and CRL Pen&Ink Change (AIG006 R4.0 – P101).

Quality Control

All required quality control criteria for the laboratory, method, and system performance audits were evaluated and determined to be within the CRL's QC limits with exceptions as follows;

Glucose/Glutamic acid (GGA) checks: Recoveries of GGA checks of 67.1% and 47.2% were out of the limits (84.8% - 115.4%) and could indicate low bias. A probable cause is the standard lot used (LIMS ID# 3052808, NSI Lot#052013). Sample results are flagged "L" in LIMS for estimated and the possible low bias.

Final dissolved oxygen (Final DO): Final DO readings obtained for all dilutions of sample 1405002-01 (Field Sample Number S01) were below the limit of 1 mg/L. BOD results for the sample should be considered estimated and remains flagged as above.

Oxygen depletions: Oxygen depletions for all dilutions of field blank sample 1405002-02 (Field Sample Number B01) was found to be less than 2 mg/L. BOD result for the sample is flagged "U". The concentration in the field blank is below the reported limit.

Analyst Signature Francis A. Awanya Date 6/6/2014

FAA 6/6/2014
Francis Awanya, Group Leader

Environmental Protection Agency Region 5
Chicago Regional Laboratory
536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: New Horizon Dairy, LLC	
77 West Jackson Boulevard	Project Number: 02CB2014	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Jun-06-14 11:25

FAA 6/6/2014
Francis Awanya, Group Leader

Environmental Protection Agency Region 5
Chicago Regional Laboratory
536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: New Horizon Dairy, LLC	
77 West Jackson Boulevard	Project Number: 02CB2014	Reported:
Chicago IL, 60604	Project Manager: Cheryl Burdett	Jun-06-14 11:25

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S01	1405002-01	Water	Apr-29-14 14:30	May-01-14 08:50
B01	1405002-02	Water	Apr-30-14 15:27	May-01-14 08:50

BOD, 5 day, SM 5210 B (modified)
US EPA Region 5 Chicago Regional Laboratory

S01 (1405002-01) Water Sampled: Apr-29-14 14:30 Received: May-01-14 08:50

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Biochemical Oxygen Demand	1800	L		2	mg/L	1	B405043	May-01-14	May-01-14

B01 (1405002-02) Water Sampled: Apr-30-14 15:27 Received: May-01-14 08:50

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Biochemical Oxygen Demand	U			2	mg/L	1	B405043	May-01-14	May-01-14

FAA 6/6/2014
Francis Awanya, Group Leader

Environmental Protection Agency Region 5
Chicago Regional Laboratory
536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: New Horizon Dairy, LLC	
77 West Jackson Boulevard	Project Number: 02CB2014	Reported:
Chicago IL, 60604	Project Manager: Cheryl Burdett	Jun-06-14 11:25

Notes and Definitions

L	The identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
U	Not Detected
NR	Not Reported

FAA 6/6/2014
Francis Awanya, Group Leader

Items for Project Manager Review

LabNumber	Analysis	Analyte	Exception
			Default Report (not modified)
			VERSION 6.12:2007
1405002-01	BOD	Biochemical Oxygen Demand	L: The identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
B405043-BS1	BOD	Biochemical Oxygen Demand	Exceeds lower control limit
B405043-BS2	BOD	Biochemical Oxygen Demand	Exceeds lower control limit

FMA 6/6/2014

Sample, Log and Extraction Comments

1405002-01
BOD

pH = 7
pH = 7

1405002-02
BOD

pH = 5
pH = 5

For 6/6/2014

(BLANK) FAA 6/6/2014

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CHICAGO REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

LABORATORY ACCREDITATION BUREAU
ACCREDITED ISO/IEC 17025
Certificate # L2230 Testing

Date: 5/23/2014

Subject: Review of Region 5 Data for New Horizon Dairy, LLC

From: Anna Knoebel, Chemist
Region 5 Chicago Regional Laboratory

To: Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604

The data being transmitted under this cover memo successfully passed CRL's internal data review procedures as documented in our current Quality Management Plan (QMP) and appropriate Standard Operating Procedures (SOPs). Please be aware that CRL does not perform data validation which is based on your data quality objectives. This function must be performed independently of the laboratory generating the data.

Results in this report represent only the samples analyzed.

Please have the U.S. EPA Project Manager/Officer call the CRL Sample Coordinator at (312) 353-0375 for any comments or questions.

Attached are Results for: New Horizon Dairy, LLC

_____ / / _____

Data Management Coordinator and Date Received

Date Transmitted: ____/____/_____

Analyses included in this report:

Ammonia N DA, Distilled Nitrate-Nitrite N DA

Environmental Protection Agency Region 5
Chicago Regional Laboratory
536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: New Horizon Dairy, LLC	
77 West Jackson Boulevard	Project Number: 02CB2014	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	May-23-14 14:57

ANALYSIS CASE NARRATIVE – Distilled Ammonia Nitrogen in Water

Work Order: 1405002
Analyst: Anna Knoebel
Phone #: (312) 353-9467

General Information

Two water samples for Ammonia Nitrogen were received on May 1, 2014. All holding times were met.

Note: All supporting data are archived with work order number 1404015.

Sample Analysis and Results

The samples were distilled and analyzed on May 13, 2014 for Ammonia Nitrogen in water using CRL SOP AIG029B, Revision # 0 (Reference Method, Standard Method 4500 – NH3- B & G). The samples were stored in the refrigerator at all times, except when in use.

Quality Control

Matrix Spike (MS)

The matrix spike recovery for sample 1405002-01 (S01) was below the acceptance limit (80 – 120 %). The blank spike (BS) recovery (103 %) and other QC audits were within the CRL limits. The sample and spike were diluted 20 fold. As a result the spike concentration was diluted out. No flags were used on this basis.

All other quality control audits were within CRL limits or did not result in qualification of the data.

ANALYSIS CASE NARRATIVE – Nitrate-Nitrite Nitrogen in Water

Work Order: 1405002
Analyst: Anna Knoebel
Phone #: (312) 353-9467

General Information

Two water samples for Nitrate-Nitrite Nitrogen were received on May 1, 2014. All holding times were met.

AK 5-23-14

Anna Knoebel, Chemist

Environmental Protection Agency Region 5
Chicago Regional Laboratory
536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: New Horizon Dairy, LLC	
77 West Jackson Boulevard	Project Number: 02CB2014	Reported:
Chicago IL, 60604	Project Manager: Cheryl Burdett	May-23-14 14:57

Note: All supporting data are archived with work order number 1404015.

Sample Analysis and Results

The samples were analyzed for Nitrate-Nitrite Nitrogen in water on May 8, 2014 using CRL SOP AIG031A, Revision #1.1 (Standard Method 4500 – NO3- E). The samples were stored in the refrigerator at all times except when in use. All samples except 1405002-02 (B01) were centrifuged prior to analysis to remove particulates.

Quality Control

All quality control audits were within CRL limits or did not result in qualification of the data

AKS-23-14

Anna Knoebel, Chemist

Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: New Horizon Dairy, LLC	
77 West Jackson Boulevard	Project Number: 02CB2014	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	May-23-14 14:57

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S01	1405002-01	Water	Apr-29-14 14:30	May-01-14 08:50
B01	1405002-02	Water	Apr-30-14 15:27	May-01-14 08:50

AK 5-23-14

Anna Knoebel, Chemist

Environmental Protection Agency Region 5
Chicago Regional Laboratory
536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: New Horizon Dairy, LLC	
77 West Jackson Boulevard	Project Number: 02CB2014	Reported:
Chicago IL, 60604	Project Manager: Cheryl Burdett	May-23-14 14:57

Nitrate - Nitrite Nitrogen, SM 4500E (modified)
US EPA Region 5 Chicago Regional Laboratory

S01 (1405002-01) Water Sampled: Apr-29-14 14:30 Received: May-01-14 08:50

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Nitrate-Nitrite N	U	U	0.09	0.25	mg/L	1	B405052	May-08-14	May-08-14

B01 (1405002-02) Water Sampled: Apr-30-14 15:27 Received: May-01-14 08:50

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Nitrate-Nitrite N	U	U	0.09	0.25	mg/L	1	B405052	May-08-14	May-08-14

AK 5-23-14

Anna Knoebel, Chemist

Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: New Horizon Dairy, LLC	
77 West Jackson Boulevard	Project Number: 02CB2014	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	May-23-14 14:57

Ammonia Nitrogen, SM4500B & C (modified)

US EPA Region 5 Chicago Regional Laboratory

S01 (1405002-01) Water Sampled: Apr-29-14 14:30 Received: May-01-14 08:50

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Ammonia as N	66.5	++	1.20	4.00	mg/L	20	B405062	May-13-14	May-13-14

B01 (1405002-02) Water Sampled: Apr-30-14 15:27 Received: May-01-14 08:50

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Ammonia as N	U	++	0.06	0.20	mg/L	1	B405062	May-13-14	May-13-14

AL 5-23-14

Anna Knoebel, Chemist

Environmental Protection Agency Region 5
Chicago Regional Laboratory
536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: New Horizon Dairy, LLC	
77 West Jackson Boulevard	Project Number: 02CB2014	Reported:
Chicago IL, 60604	Project Manager: Cheryl Burdett	May-23-14 14:57

Notes and Definitions

J	The identification of the analyte is acceptable; the reported value is an estimate.
++	CRL is not accredited for the marked test method and results.
*	This Quality Control measure meets the requirements of the CRL SOP for this analyte.
U	Not Detected
NR	Not Reported

AK 5-23-14

Anna Knoebel, Chemist

Items for Project Manager Review

LabNumber	Analysis	Analyte	Exception
			Default Report (not modified)
			VERSION 6.12.2007
	Ammonia N DA, Distilled	(Water)	J-Flags used
	Ammonia N DA, Distilled	(Water)	Result calculations based on MDL
	Nitrate-Nitrite N DA	(Water)	J-Flags used
	Nitrate-Nitrite N DA	(Water)	Result calculations based on MDL
	Nitrate-Nitrite N DA	(Water)	U-Flags used
1405002-01	Ammonia N DA, Distilled	Ammonia as N	++: CRL is not accredited for the marked test method and results.
1405002-02	Ammonia N DA, Distilled	Ammonia as N	++: CRL is not accredited for the marked test method and results.
B405062-MS1	Ammonia N DA, Distilled	Ammonia as N	*: This Quality Control measure meets the requirements of the CRL SOP for this analyte.
B405062-MS1	Ammonia N DA, Distilled	Ammonia as N	Exceeds lower control limit
B405062-MS3	Ammonia N DA, Distilled	Ammonia as N	*: This Quality Control measure meets the requirements of the CRL SOP for this analyte.
B405062-MS3	Ammonia N DA, Distilled	Ammonia as N	Exceeds lower control limit

Sample, Log and Extraction Comments

1405002-01

Ammonia N DA, Distilled

pH = 1
pH = 1

Nitrate-Nitrite N DA

pH = 1
pH = 1

1405002-02

Ammonia N DA, Distilled

pH = 1
pH = 1

Nitrate-Nitrite N DA

pH = 1
pH = 1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CHICAGO REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

LABORATORY ACCREDITATION BUREAU
ACCREDITED ISO/IEC 17025
Certificate # L2280 Testing

Date: 6/16/2014

Subject: Review of Region 5 Data for New Horizon Dairy, LLC

From: Nidia Fuentes, Analyst
Region 5 Chicago Regional Laboratory

To: Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604

The data being transmitted under this cover memo successfully passed CRL's internal data review procedures as documented in our current Quality Management Plan (QMP) and appropriate Standard Operating Procedures (SOPs). Please be aware that CRL does not perform data validation which is based on your data quality objectives. This function must be performed independently of the laboratory generating the data.

Results in this report represent only the samples analyzed.

Please have the U.S. EPA Project Manager/Officer call the CRL Sample Coordinator at (312) 353-0375 for any comments or questions.

Attached are Results for: New Horizon Dairy, LLC

_____ / / _____

Data Management Coordinator and Date Received

Date Transmitted: ____/____/_____

Analyses included in this report:

Total Phosphorus DA

Environmental Protection Agency Region 5
Chicago Regional Laboratory
536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: New Horizon Dairy, LLC	
77 West Jackson Boulevard	Project Number: 02CB2014	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Jun-16-14 13:13

Analysis Case Narrative

General Information

A total of two water samples to be analyzed for Total Phosphorus (TP) were received at the Chicago Regional Laboratory on May 01, 2014. All holding times were met. The designated analyst for the sample is Nidia Fuentes. Nidia can be reached at 312-353-9079.

Supportive data such as instrument raw data, reagents preparation sheet and miscellaneous items are filed with work order 1405001.

Sample Analysis and Results

The samples for TP were digested and analyzed using CRL SOP AIG034A, Revision # 3.7 (EPA method 365.4).

Quality Control

All quality control audits were within the CRL's limits, with the exception of matrix spike.

Matrix spike recovery for sample 1405002-01 (S01) did not meet the QC limits of 60% to 126%. Matrix spike recovery is invalid because the spike was diluted out. No flag will be applied under this circumstance.

Nidia Fuentes, Analyst

Environmental Protection Agency Region 5
Chicago Regional Laboratory
536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: New Horizon Dairy, LLC	
77 West Jackson Boulevard	Project Number: 02CB2014	Reported:
Chicago IL, 60604	Project Manager: Cheryl Burdett	Jun-16-14 13:13

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S01	1405002-01	Water	Apr-29-14 14:30	May-01-14 08:50
B01	1405002-02	Water	Apr-30-14 15:27	May-01-14 08:50

Phosphorus, Colorimetric, EPA 365.4 (modified)
US EPA Region 5 Chicago Regional Laboratory

S01 (1405002-01) Water Sampled: Apr-29-14 14:30 Received: May-01-14 08:50

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Phosphorus	37.7			3.00	mg/L	20	B405073	May-21-14	May-23-14

B01 (1405002-02) Water Sampled: Apr-30-14 15:27 Received: May-01-14 08:50

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Phosphorus	U			0.15	mg/L	1	B405073	May-21-14	May-23-14

Nidia Fuentes, Analyst

Environmental Protection Agency Region 5
Chicago Regional Laboratory
536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: New Horizon Dairy, LLC	
77 West Jackson Boulevard	Project Number: 02CB2014	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	Jun-16-14 13:13

Notes and Definitions

U	Not Detected
NR	Not Reported

Nidia Fuentes, Analyst

Items for Project Manager Review

LabNumber	Analysis	Analyte	Exception
			Default Report (not modified)
			VERSION 6.12.2008
	Total Phosphorus DA	(Water)	J-Flags used
	Total Phosphorus DA	(Water)	RPD calculations based on %Recovery
B405073-DUP3	Total Phosphorus DA	Total Phosphorus	Exceeds RPD control limit
B405073-MS1	Total Phosphorus DA	Total Phosphorus	Exceeds upper control limit
B405073-MS2	Total Phosphorus DA	Total Phosphorus	Exceeds upper control limit
B405073-MS3	Total Phosphorus DA	Total Phosphorus	Exceeds upper control limit

Sample, Log and Extraction Comments

1405002-01
Total Phosphorus DA

pH = 1
initial vol.=5 mL pH = 1

1405002-02
Total Phosphorus DA

pH = 1
pH = 1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CHICAGO REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

LABORATORY ACCREDITATION BUREAU
ACCREDITED ISO/IEC 17025
Certificate # L2280 Testing

Date: 5/20/2014

Subject: Review of Region 5 Data for New Horizon Dairy, LLC

From: Laurence Wong, Analyst
Region 5 Chicago Regional Laboratory

To: Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604

The data being transmitted under this cover memo successfully passed CRL's internal data review procedures as documented in our current Quality Management Plan (QMP) and appropriate Standard Operating Procedures (SOPs). Please be aware that CRL does not perform data validation which is based on your data quality objectives. This function must be performed independently of the laboratory generating the data.

Results in this report represent only the samples analyzed.

Please have the U.S. EPA Project Manager/Officer call the CRL Sample Coordinator at (312) 353-0375 for any comments or questions.

Attached are Results for: New Horizon Dairy, LLC

_____ / / _____

Data Management Coordinator and Date Received

Date Transmitted: ____/____/_____

Analyses included in this report:

Solids, TDS

Environmental Protection Agency Region 5
Chicago Regional Laboratory
536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: New Horizon Dairy, LLC	
77 West Jackson Boulevard	Project Number: 02CB2014	Reported:
Chicago IL, 60604	Project Manager: Cheryl Burdett	May-20-14 14:56

ANALYSIS CASE NARRATIVE

General Information

Two (2) samples under Work Order #1405002 were received on May 1, 2014 for Total Dissolved Solids (TDS) analysis. The sample holding time limit was met. The designated analyst for these samples was Laurence Wong (phone number: 312-353-8418).

The data hard copies are filed with WO#1405001. Other pertinent information is provided in the final analysis report.

Sample Analysis and Results

The sample preparation and analysis followed procedure CRL SOP AIG017 r5.0 (Standard Method 2540 C). The preparation and analysis began on May 6, 2014, and were completed on May 8, 2014. The samples were kept in refrigerator at $\leq 6°C$ at all time except when needed for the analysis.

Quality Control

All quality control (QC) audits followed CRL guidelines. The required quality control criteria for the laboratory, method, and system performance audits were evaluated and determined to be within the CRL's QC limits.

Signature Laurence Wong, Date May 20, 2014

LW 5/20/14
Laurence Wong, Analyst

Environmental Protection Agency Region 5
Chicago Regional Laboratory
536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: New Horizon Dairy, LLC Project Number: 02CB2014 Project Manager: Cheryl Burdett	Reported: May-20-14 14:56

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S01	1405002-01	Water	Apr-29-14 14:30	May-01-14 08:50
B01	1405002-02	Water	Apr-30-14 15:27	May-01-14 08:50

Dissolved Solids, SM 2540C (modified)
US EPA Region 5 Chicago Regional Laboratory

S01 (1405002-01) Water Sampled: Apr-29-14 14:30 Received: May-01-14 08:50

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	2800			20.0	mg/L	1	B405047	May-06-14	May-06-14

B01 (1405002-02) Water Sampled: Apr-30-14 15:27 Received: May-01-14 08:50

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	U			20.0	mg/L	1	B405047	May-06-14	May-06-14

LW 5/20/14
Laurence Wong, Analyst

Environmental Protection Agency Region 5
Chicago Regional Laboratory
536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: New Horizon Dairy, LLC	
77 West Jackson Boulevard	Project Number: 02CB2014	Reported:
Chicago IL, 60604	Project Manager: Cheryl Burdett	May-20-14 14:56

Notes and Definitions

U	Not Detected
NR	Not Reported

LW 5/20/14
Laurence Wong, Analyst

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CHICAGO REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

LABORATORY ACCREDITATION BUREAU
ACCREDITED ISO/IEC 17025
Certificate # L2230 Testing

Date: 5/20/2014

Subject: Review of Region 5 Data for New Horizon Dairy, LLC

From: Laurence Wong, Analyst
Region 5 Chicago Regional Laboratory

To: Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604

The data being transmitted under this cover memo successfully passed CRL's internal data review procedures as documented in our current Quality Management Plan (QMP) and appropriate Standard Operating Procedures (SOPs). Please be aware that CRL does not perform data validation which is based on your data quality objectives. This function must be performed independently of the laboratory generating the data.

Results in this report represent only the samples analyzed.

Please have the U.S. EPA Project Manager/Officer call the CRL Sample Coordinator at (312) 353-0375 for any comments or questions.

Attached are Results for: New Horizon Dairy, LLC

_____ / /

Data Management Coordinator and Date Received

Date Transmitted: ____/____/_____

Analyses included in this report:

Solids, TSS

Environmental Protection Agency Region 5
Chicago Regional Laboratory
536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: New Horizon Dairy, LLC	
77 West Jackson Boulevard	Project Number: 02CB2014	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	May-20-14 14:28

ANALYSIS CASE NARRATIVE

General Information

Two (2) samples under Work Order #1405002 were received on May 1, 2014 for Total Suspended Solids (TSS) analysis. The sample holding time limit was met. The designated analyst for these samples was Laurence Wong (phone number: 312-353-8418).

All the data hard copies are filed with WKO#1405001. Other pertinent information is provided in the final analysis report.

Sample Analysis and Results

The sample preparation and analysis followed procedure CRL SOP AIG018 r4.0 (Standard Method 2540 D). The preparation and analysis began on May 6, 2014, and were completed on May 7, 2014. All the samples were kept in refrigerator at ≤ 6°C at all time except when in use.

Quality Control

All quality control (QC) audits followed CRL guidelines. The required quality control criteria for the laboratory, method, and system performance audits were evaluated and determined to be within the CRL's QC limits with only one exception. The RPD result of the source and duplicate of sample #1405002-01 (field designation: S01 [Water]) was 30%, greater than the QC limit of 20%. This was deemed mainly due to the inhomogeneity in the sample and still acceptable. The result of this sample was thus flagged "J" to indicate that it was an estimate. (Note: RPD's of two other source and duplicate pairs in the same batch were all well within the QC limit.)

Signature Laurence Wong, Date May 20, 2014

LW 5/20/14
Laurence Wong, Analyst

Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: New Horizon Dairy, LLC	
77 West Jackson Boulevard	Project Number: 02CB2014	Reported:
Chicago IL, 60604	Project Manager: Cheryl Burdett	May-20-14 14:28

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S01	1405002-01	Water	Apr-29-14 14:30	May-01-14 08:50
B01	1405002-02	Water	Apr-30-14 15:27	May-01-14 08:50

Total Suspended Solids, SM 2540 D (modified)
US EPA Region 5 Chicago Regional Laboratory

S01 (1405002-01) Water Sampled: Apr-29-14 14:30 Received: May-01-14 08:50

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Suspended Solids	133	J		5	mg/L	1	B405051	May-06-14	May-06-14

B01 (1405002-02) Water Sampled: Apr-30-14 15:27 Received: May-01-14 08:50

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Suspended Solids	U			5	mg/L	1	B405051	May-06-14	May-06-14

EAW 5/20/14
Laurence Wong, Analyst

Environmental Protection Agency Region 5
Chicago Regional Laboratory
536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: New Horizon Dairy, LLC	
77 West Jackson Boulevard	Project Number: 02CB2014	**Reported:**
Chicago IL, 60604	Project Manager: Cheryl Burdett	May-20-14 14:28

Notes and Definitions

J	The identification of the analyte is acceptable; the reported value is an estimate.
U	Not Detected
NR	Not Reported

5/20/14

Laurence Wong, Analyst

General Chemistry Data Package Cover Sheet

Client: LEIDOS, INC.
Project: NEW HORIZON DAIRY, LLC
SDG: 4095529

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: 03CB2014 NEW HORIZON DAIRY,LLC
Pace Project No.: 4095529

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4095529001	WATERWAY SE OF BUNKER	Water	04/29/14 14:30	04/29/14 15:30

Pace Analytical®

CASE NARRATIVE - GENERAL CHEMISTRY ANALYSIS

Lab Report Number (SDG): 4095529
Client: LEIDOS, INC.
Project Name: NEW HORIZON DAIRY, LLC
Project Number: 03CB2014

1. RECEIPT

The sample was received at 21°C with no ice.

2. HOLDING TIMES

A. **Sample Preparation:** All method specified holding times were met.
B. **Sample Analysis:** All method specified holding times were met.

3. METHOD

Preparation: Not Applicable
Analysis: SM 9222D

4. PREPARATION

Sample preparation proceeded normally.

5. ANALYSIS

A. **Calibration:**
   1. **Positive Control (BOD Seed Check):** The method acceptance criteria were met.
B. **Blanks:**
   1. **Negative Control (Sterility Blank):** The method acceptance criteria were met.
   2. **Method:** Not applicable to this SDG.
C. **Sample Duplicates:** Sample WATERWAY SE OF BUNKER was designated as the parent sample for the duplicate analysis for the Fecal Coliform analysis. The in-house precision criteria were met.
D. **Samples:** Sample analyses proceeded normally.
E. **Reanalysis:** None required for this SDG.
F. **Comments:** No additional comments are needed.

I certify that this data package is in compliance, with the terms and conditions agreed to by **Pace Analytical Services, Inc.**, and by the client, both technically and for completeness, except for the conditions detailed above. The Laboratory Manager or his designee, as verified by the following signature, has authorized release of the data contained in this hard copy data package:

Signed: Leigh A Begalske Date: 05/07/14

Name: Leigh A. Begalske Position: Quality Assurance Auditor

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: 03CB2014 NEW HORIZON DAIRY,LLC
Pace Project No.: 4095529

Lab ID	Sample ID	Method	Analysts	Analytes Reported
4095529001	WATERWAY SE OF BUNKER	SM 9222D	DEY	1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: 03CB2014 NEW HORIZON DAIRY,LLC
Pace Project No.: 4095529

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: 03CB2014 NEW HORIZON DAIRY,LLC
Pace Project No.: 4095529

Green Bay Certification IDs
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 11888
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
US Dept of Agriculture #: S-76505
Wisconsin Certification #: 405132750

REPORT OF LABORATORY ANALYSIS

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 5
77 West Jackson Boulevard
Chicago, Illinois 60604

4095529

CHAIN OF CUSTODY RECORD

Activity Code:

PROJ. NO.: 03CB2014
PROJECT NAME: New Horizons Dairy, LLC
SAMPLERS: (Print Name and Sign) Ben Atkinson, Cheryl Burdett

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CON-TAINERS	Analyte: Fecal Coliform						TAG NUMBERS
SO	4/29/14	2:30pm		X	Waterway S of Bunker	1	X		+Sterile				Could be high in Fecal

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Ship To:
[signature]	4/29/14 3:30pm	[signature]	4/29/14 15:30	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)		ATTN:
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Airbill Number
				Chain of Custody Seal Numbers

Distribution: White - Accompanies Shipment; Pink - Coordinator Field Files; Yellow - Laboratory File

Printed on Recycled Paper/Printed with Soy-Based Ink

Sample Condition Upon Receipt

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI. 54302

Pace Analytical™

Project #: **WO# : 4095529**

4095529

Client Name: New Horizon Dairy

Courier: ☐ Fed Ex ☐ UPS ☑ Client ☐ Pace Other: _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other _____

Thermometer Used SR51 Type of Ice: Wet Blue Dry (None) ☐ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 2.1 /Corr: 2.1 Biological Tissue is Frozen: ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Person examining contents:
Date: 4/29/14
Initials: MH

Temp should be above freezing to 6°C for all sample except Biota.
Frozen Biota Samples should be received ≤ 0°C.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☐Yes ☑No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time: MH 4/29/14
Short Hold Time Analysis (<72hr):	☑Yes ☐No ☐N/A	6. Coliform MH 4/29/14
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☑No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☑No ☐N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes ☐No ☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes ☐No ☑N/A	
exceptions: VOA, Coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☑Yes ☐No	Initial when completed / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	14.
Trip Blank Present:	☐Yes ☐No ☑N/A	15.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: 4/29/14

F-GB-C-031-Rev.02 (28Oct2013) SCUR Form

General Chemistry Sample Data Cover Sheet

Client: LEIDOS, INC.
Project: NEW HORIZON DAIRY, LLC
SDG: 4095529

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 03CB2014 NEW HORIZON DAIRY,LLC
Pace Project No.: 4095529

Matrix: Water
% Moisture:
Acode: 9222D MICRO Fecal Coli by MF
Prep/Method: SM 9222D / SM 9222D

Sample: WATERWAY SE OF BUNKER WI LOD/LOQ
Lab ID: 4095529001
Collected: 04/29/14 14:30
Received: 04/29/14 15:30

CAS No.	Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	Qual
	Fecal Coliforms	**631000**	CFU/100 mL	9010	9010	9010	04/29/14 17:15	04/29/14 17:15	

REPORT OF LABORATORY ANALYSIS

Date: 05/07/2014 09:17 AM

General Chemistry QC Summary Cover Sheet

Client: LEIDOS, INC.
Project: NEW HORIZON DAIRY, LLC
SDG: 4095529

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

METHOD BLANK RESULTS

Project: 03CB2014 NEW HORIZON DAIRY,LLC
Pace Project No.: 4095529

QB Batch: MBIO/3383 **Prepared:**
Method(s): SM 9222D
Associated Lab Samples: 4095529001

CAS No.	Parameters	Results	Units	LOQ	LOD	Analyzed	Qual
	Fecal Coliforms	<1	CFU/100 mL	1.0	1.0	04/29/14	
	Fecal Coliforms	<1	CFU/100 mL	1.0	1.0	04/29/14	

Type	Sample	Matrix
BLANK	964781	Water
BLANK	964783	Water

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

DUPLICATE RESULTS

Project: 03CB2014 NEW HORIZON DAIRY,LLC
Pace Project No.: 4095529

QB Batch: MBIO/3383 **Prepared:**
Method(s): SM 9222D

Analyte	Dup RPD	QC Limits MAX RPD Dup	Results Sample	Dup	Units	Analyzed	Qual
Fecal Coliforms			631000	530000	CFU/100	04/29/14	

Type	Sample	Client Sample ID
DUP	964782	WATERWAY SE OF BUNKER

REPORT OF LABORATORY ANALYSIS

Fecal Duplicate Analysis

DEY 5-2-14

Pace Analytical Services, Inc
1241 Bellevue Street Suite 9
Green Bay, WI 54302
Phone: 920 469 4236
Fax: 920 469 8827

Analyst	Set Date	Batch	Matrix	Sample No.	Duplicate Analyses D_1	D_2	Logarithms of Counts L_1	L_2	Range of Logarithms (R_{log}) (L_1-L_2)	Precision Criteria (3.27 R_{log}<0.1566)
DEY	02/18/14	3298/3299	Sludge	4092262-001	177000	128000	5.2480	5.1072	0.1408	(Pass)
DEY	02/21/14	3300/3301	Sludge	4091456-001	<2870	<2870	NA	NA	NA	NA
DEY	03/11/14	3316/3317	Solid	4093052-001	48100	43000	4.6821	4.6335	0.0487	(Pass)
DEY	04/01/14	3336/3337	Sludge	4094034-001	65500	67800	4.8162	4.8312	0.0150	(Pass)
DEY	04/02/14	3340/3341	Sludge	4094097-001	436000	495000	5.6395	5.6946	0.0551	(Pass)
DEY	04/07/14	3352/3353	Sludge	4094305-001	1130000	923000	6.0531	5.9652	0.0879	(Pass)
HKV	04/08/14	3354/3355	Sludge	4094375-001	227000	227000	5.3560	5.3560	0.0000	(Pass)
DEY	04/15/14	3358/3359	Sludge	4094747-001	90600	104000	4.9571	5.0170	0.0599	(Pass)
DEY	04/16/14	3360/3361	Water	4094830-001	4500	3600	3.6532	3.5563	0.0969	(Pass)
DEY	04/16/14	3362/3363	Water	4094862-001	4500	3600	3.6532	3.5563	0.0969	(Pass)
DEY	04/18/14	3366/3367	Water	4094991-001	29600	35500	4.4713	4.5502	0.0789	(Pass)
DEY	04/23/14	3370/3371	Sludge	4095172-001	1400000	1560000	6.1461	6.1931	0.0470	(Pass)
DEY	05/25/14	3374/3375	Water	4095300-001	5100	5700	3.7076	3.7559	0.0483	(Pass)
DEY	04/28/14	3380/3381	Water	4095464-001	<2	<2	NA	NA	NA	NA
DEY	04/29/14	3382/3383	Water	4095529-001	631000	530000	5.8000	5.7243	0.0758	(Pass)
DEY	04/30/14	3384/3385	Water	4095583-001	270000	260000	5.4314	5.4150	0.0164	(Pass)

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 03CB2014 NEW HORIZON DAIRY,LLC
Pace Project No.: 4095529

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4095529001	WATERWAY SE OF BUNKER	SM 9222D	MBIO/3382	SM 9222D	MBIO/3383

REPORT OF LABORATORY ANALYSIS

Date: 05/07/2014 09:17 AM

General Chemistry Raw Data Cover Sheet

Client: LEIDOS, INC.
Project: NEW HORIZON DAIRY, LLC
SDG: 4095529

Fecal Coliform Benchsheet

Method: SM 9222D
PQL: 1 CFU/100mL
Analysis Date: 4-29-14
Matrix: Water

Dilution Water Lot #: 13235
Dilution Water Exp. Date: 5-21-14
M-FC Broth Lot #: A3140
M-FC Broth Exp. Date: 5.20-14

Filter Lot #: F3BA79020N
Filter Exp Date: 02-2015
Petri Dish Lot #: F3DA99487
Petri Dish Exp. Date: 04-2016

Analyst: DSH/MKV
Queue/Batch #: 53821 33983

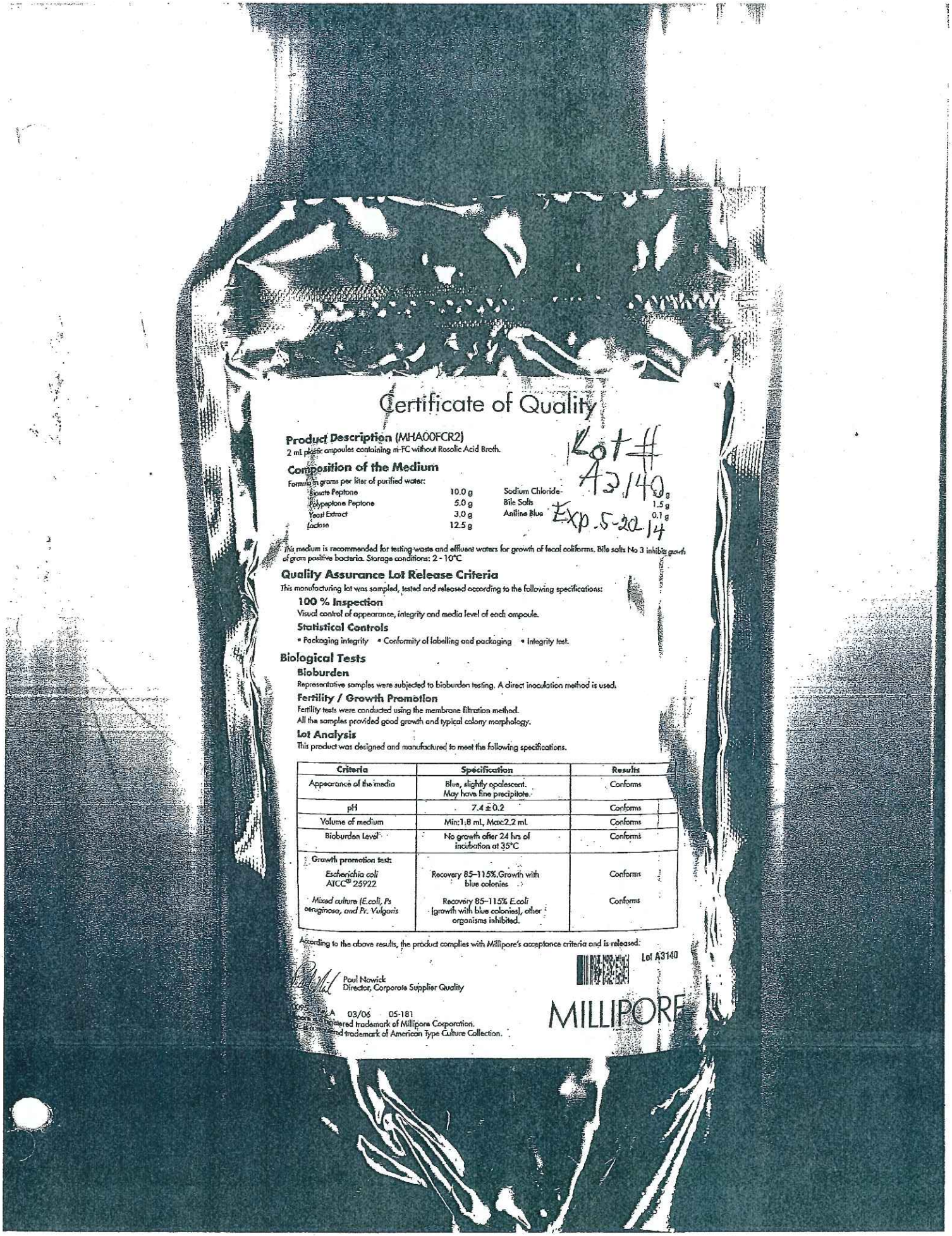
Lab ID #	Sample Date	Sample Time	Residual Chlorine (Positive = Purple) (Circle One)		Sample Volume (mL)	Date: 4-29-14 Time In:	Uncorrected Temp In	Corrected Temp In	Date: 4-30-14 Time Out:	Uncorrected Temp Out	Corrected Temp Out	Number of CFU (20 to 60)	% Solids (if Applicable)	Final Result CFU/100mL	PQL	Footnote	Duplicate Read (<5%)
Sterility Blank Start	4-29-14	—	Positive	~~Negative~~	100	17:15	44.3	44.5	16:15	44.4	44.6	0		<1	1		
BOD Seed Check	↓	—	Positive	Negative	100							TNTC		—	—		
4095529-001	4-29-14	14:30	Positive	Negative	0.0001							2		631000	9010		
			Positive	Negative	0.001							6		—	—		6
Duplicate Analysis (<3.27R_{Log})			Positive	Negative	0.01							62		—	—		
↓			Positive	Negative	0.1							TNTC		—	—		
4095529-001 Dup	4-29-14	14:30	Positive	Negative	0.0001							0		530000	10000		
			Positive	Negative	0.001							7		—	—		
			Positive	Negative	0.01							53		—	—		
			Positive	Negative	0.1							TNTC		—	—		
4095530-001	4-29-14	14:45	Positive	Negative	0.0001							0		570000	10000		
			Positive	Negative	0.001							9		—	—		
			Positive	Negative	0.01							57		—	—		
			Positive	Negative	0.1							TNTC		—	—		
			Positive	Negative													
			Positive	Negative													
			Positive	Negative													
			Positive	Negative													
			Positive	Negative													
Sterility Blank End	4-29-14	—	Positive	Negative	100	↓	↓	↓	↓	↓	↓	0		<1	1		

Duplicate Analysis (<3.27R_{Log}) A single sample must be plated and analyzed two times. The duplicate analysis must be performed once for every 20 samples during a preparation batch.

*Duplicate Read (<5%) A single sample is read two separate occasions, if possible by a second analyst (acceptance criteria for secondary analyst is <10% RPD in colony counts). If a second analyst is not available, the primary may perform the duplicate read, acceptance criteria is <5% RPD between colony counts.

Analyst Review/Date: [signature] 5-1-14

Secondary Review/Date: _____



Certificate of Quality

Lot # A3140

Exp. 5-20-14

Product Description (MHA00FCR2)

2 mL plastic ampoules containing m-FC without Rosolic Acid Broth.

Composition of the Medium

Formula in grams per liter of purified water:

Bacto Peptone	10.0 g	Sodium Chloride	8.0 g
Polypeptone Peptone	5.0 g	Bile Salts	1.5 g
Yeast Extract	3.0 g	Aniline Blue	0.1 g
Lactose	12.5 g		

This medium is recommended for testing waste and effluent waters for growth of fecal coliforms. Bile salts No 3 inhibits growth of gram positive bacteria. Storage conditions: 2 - 10°C

Quality Assurance Lot Release Criteria

This manufacturing lot was sampled, tested and released according to the following specifications:

100 % Inspection

Visual control of appearance, integrity and media level of each ampoule.

Statistical Controls

• Packaging integrity • Conformity of labelling and packaging • Integrity test.

Biological Tests

Bioburden

Representative samples were subjected to bioburden testing. A direct inoculation method is used.

Fertility / Growth Promotion

Fertility tests were conducted using the membrane filtration method.
All the samples provided good growth and typical colony morphology.

Lot Analysis

This product was designed and manufactured to meet the following specifications.

Criteria	Specification	Results
Appearance of the media	Blue, slightly opalescent. May have fine precipitate.	Conforms
pH	7.4 ± 0.2	Conforms
Volume of medium	Min:1.8 mL, Max:2.2 mL	Conforms
Bioburden Level	No growth after 24 hrs of incubation at 35°C	Conforms
Growth promotion test:		
Escherichia coli ATCC® 25922	Recovery 85–115%.Growth with blue colonies	Conforms
Mixed culture (E.coli, Ps aeruginosa, and Pr. Vulgaris	Recovery 85–115% *E.coli* (growth with blue colonies), other organisms inhibited.	Conforms

According to the above results, the product complies with Millipore's acceptance criteria and is released.

Lot A3140

Paul Nowick
Director, Corporate Supplier Quality

MILLIPORE

rec. 10-11-13
open. 12-4-13

CERTIFICATION

Fisher Scientific certifies that the membrane filter listed below

Catalog Number : 09-719-555
Lot Number : F3BA79020N
Expiry Date : FEB-2015

with the lot number specified above has been manufactured for use in the bacteriological analysis of potable waters in accordance with the procedures referenced in Standard Methods, (current edition) and laboratory standards for equipment and materials set forth by the U.S. Environmental Protection Agency.

The filter specification and the acceptable limits are listed on the other side of this sheet.

Fisherbrand®

SPECIFICATION	ACCEPTABLE LIMITS
Pore Size	0.45 µm*
Flow Rate	≥ 70 mL/min/cm2 at 13.5 psi
Water Extractables	≤ 2.5%
Extractables	
Inorganics:	
Ca	≤ 0.01 mg/filter
Zn	≤ 0.001 mg/filter
Ag	≤ 0.0001 mg/filter
Pb	≤ 0.0001 mg/filter
Hg	≤ 0.0001 mg/filter
Cu	≤ 0.0001 mg/filter
Cr	≤ 0.0001 mg/filter
Organic (TOC)	≤ 1.0 mg/filter
P(reported as phosphate)	≤ 0.02 mg/filter
Ammonia (NH3)	≤ 0.01 mg/filter
Na	≤ 0.01 mg/filter
Neutrality	
pH of Extract	≤ 8.3
Total acidity	≤ 0.001 mEq/filter

Biological Properties

Fertility/growth promotion

Fecal and total Coliform Recovery on membrane ≥ 90% of spread plates *E. coli* (ATCC 8739) & *E. aerogenes* (ATCC 49701) on finished product ≥ 90% of spread plates

Sterility

This product has been sterilized by Ethylene Oxide (EO) in a validated sterilization cycle. Biological indicators incorporated in a lot have shown to be sterile.

Country of Origin: FRANCE

*Determined by retention of S.marcescens.

Fisherbrand®

0303 Rev.- 03/06

CERTIFICATION

Fisher Scientific certifies that the Petri Dishes with Pad listed below :

Catalog Number : 09-720-501, 09-720-503
Lot Number : F3DA99487
Expiry Date : APR-2016

With the lot number specified above has been manufactured for one-time, disposable use in the culturing of micro-organisms captured on a 47 mm filter in accordance with the procedures referenced in Standard Methods, (current edition) and laboratory standards for equipment and materials set forth by the U.S. Environmental Protection Agency. The absorbent capacity of the included absorbent pad is 1.8 to 2.2 uL.

The petri dish with pad specifications are listed on the other side of this sheet.

Fisherbrand®

rec'd
11-11-13
DEY

>~ CERTIFICATE OF ANALYSIS ~

DILU-LOK II™

Product Name:	Phosphate Buffer with Magnesium Chloride ($MgCl_2$), 99ml
Container Size:	145ml polypropylene flip-top vial
Catalog No:	D699
Lot No:	13235
Expiration Date:	8/21/2015
Certificate Date:	10/8/2013

This product has been supplied by Hardy Diagnostics in accordance with its quality system, which complies with U.S. Food and Drug Administration's (FDA's) Quality Systems Regulation (QSR) and current Good Manufacturing Practices (cGMP) contained in Title 21 Part 820 Code of Federal Regulations (CFR). The company's manufacturing establishments are registered and its medical devices are listed with the FDA. Hardy Diagnostics' quality management system is certified to ISO 13485 for medical devices.

Representative samples of this lot were tested and found to meet the specifications published in the Hardy Diagnostics technical manual, titled HUGO™ (Hardy User Group Observer), offered on CD-ROM and available on the website HardyDiagnostics.com, plus the requirements set forth in *USP 35—NF 30, Official Monographs / Purified Water*. Rockville, MD: US Pharmacopeial Convention; 2012:5041.

Toxicity Testing

Hardy Diagnostics tests this product on a quarterly basis to ensure that it meets toxicity testing guidelines outlined in *Standard Methods for the Examination of Dairy Products, 16th Ed.* and *Standard Methods for the Examination of Water and Wastewater, 19th Ed.*

In addition, deionized water used to manufacture this product meets the requirements of the "Quality of Purified Water Used in Microbiology Testing" as described in *Standard Methods for the Examination of Water and Wastewater, 20th Ed.*

Physical Characteristics

Appearance: Clear, colorless; with no precipitate or debris

Fill: 99.0 ± 2.0ml

pH: 7.2 ± 0.1 at 25°C. The pH stated was obtained shortly after the manufacture date. The pH may vary within the stated range depending on the age of the product, the probe used, and the type of pH meter used by the customer.

Microbial Load Testing

Acceptable microbial load (as described in the "Test for Microbial Load" section of the "Finished Product Quality Control" document posted on HUGO™) was verified at the time of release.

Ingredient Origin

Any ingredients of animal origin in this lot have been sourced from Bovine Spongiform Encephalopathy- (BSE-) free and Transmissible Spongiform Encephalopathy- (TSE-) free countries as identified by the United States Department of Agriculture (USDA). This product complies with 9 CFR 94.18 "Restrictions on importation of meat and edible products from ruminants due to bovine spongiform encephalopathy."

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 03CB2014 NEW HARIMAN DAIRY,LLC
Pace Project No.: 4095529

QC Batch: MBIO/3383
QC Batch Method: SM 9222D
Analysis Method: SM 9222D
Analysis Description: 9222D MICRO Fecal Coliform by MF
Associated Lab Samples: 4095529001

METHOD BLANK: 964781 Matrix: Water
Associated Lab Samples: 4095529001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fecal Coliforms	CFU/100 mL	<1	1.0	04/29/14 17:15	

METHOD BLANK: 964783 Matrix: Water
Associated Lab Samples: 4095529001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fecal Coliforms	CFU/100 mL	<1	1.0	04/29/14 17:15	

SAMPLE DUPLICATE: 964782

Parameter	Units	4095529001 Result	Dup Result	RPD	Max RPD	Qualifiers
Fecal Coliforms	CFU/100 mL	631000	530000			

REPORT OF LABORATORY ANALYSIS

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 03CB2014 NEW HARIMAN DAIRY,LLC
Pace Project No.: 4095529

Sample: WATERWAY SE OF BUNKER **Lab ID: 4095529001** Collected: 04/29/14 14:30 Received: 04/29/14 15:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
9222D MICRO Fecal Coli by MF	Analytical Method: SM 9222D Preparation Method: SM 9222D								
Fecal Coliforms	**631000**	CFU/100 mL	9010	9010	9010	04/29/14 17:15	04/29/14 17:15		

REPORT OF LABORATORY ANALYSIS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CHICAGO REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

LABORATORY ACCREDITATION BUREAU
ACCREDITED ISO/IEC 17025
Certificate # L2232 Testing

Date: 6/23/2014

Subject: Review of Region 5 Data for New Horizon Dairy, LLC

From: Nidia Fuentes, Analyst
Region 5 Chicago Regional Laboratory

To: Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604

The data being transmitted under this cover memo successfully passed CRL's internal data review procedures as documented in our current Quality Management Plan (QMP) and appropriate Standard Operating Procedures (SOPs). Please be aware that CRL does not perform data validation which is based on your data quality objectives. This function must be performed independently of the laboratory generating the data.

Results in this report represent only the samples analyzed.

Please have the U.S. EPA Project Manager/Officer call the CRL Sample Coordinator at (312) 353-0375 for any comments or questions.

Attached are Results for: New Horizon Dairy, LLC

_____ / /

Data Management Coordinator and Date Received

Date Transmitted: ____/____/_____

Analyses included in this report:

TKN DA

Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: New Horizon Dairy, LLC Project Number: 02CB2014 Project Manager: Cheryl Burdett	Reported: Jun-23-14 11:46

Analysis Case Narrative

General Information

A total of two water samples to be analyzed for Total Kjeldahl Nitrogen (TKN) were received at the Chicago Regional Laboratory on May 01, 2014. Holding times were met for all samples except 1405002-02 (S02). Field blank sample 1405002-02 (S02) required to be reanalyzed after holding time had expired due to an isolated elevated spectrophotometric background possibly caused by air bubbles in the cell. Sample result is estimated and flagged "J". The designated analyst for these samples is Nidia Fuentes. Nidia can be reached at 312-353-9079.

Supportive data such as instrument raw data, reagents preparation sheet and miscellaneous items are filed with work order 1405001.

Sample Analysis and Results

The samples for TKN were digested and analyzed using CRL SOP AIG035A, Revision # 3.0 (EPA method 351.2).

Quality Control

All quality control audits were within the CRL limits, with the exception of matrix spike and reporting limit (RL) during the reanalysis of sample 1405002-02 (S02).

Matrix spike recovery for sample 1405002-01 (S01) did not meet the QC limits of 41% to 165%. Matrix spike recovery is invalid because the spike was diluted out. No flag will be applied under this circumstance.

The RL recovery was 33% below the limits of 65 to 135% during the re-analysis of field blank sample 1405002-02 (S02). There is no TKN in the field blank. No flag was applied to the field blank results on this basis. This situation does not affect the data quality. However, this sample result is considered estimated due to exceeding holding time.

Nidia Fuentes

Nidia Fuentes, Analyst

Environmental Protection Agency Region 5
Chicago Regional Laboratory
536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5	Project: New Horizon Dairy, LLC	
77 West Jackson Boulevard	Project Number: 02CB2014	Reported:
Chicago IL, 60604	Project Manager: Cheryl Burdett	Jun-23-14 11:46

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S01	1405002-01	Water	Apr-29-14 14:30	May-01-14 08:50
B01	1405002-02	Water	Apr-30-14 15:27	May-01-14 08:50

Total Kjeldahl Nitrogen, EPA 351.2 (modified)
US EPA Region 5 Chicago Regional Laboratory

S01 (1405002-01) Water Sampled: Apr-29-14 14:30 Received: May-01-14 08:50

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Kjeldahl Nitrogen	154			10.0	mg/L	20	B405072	May-21-14	May-27-14

B01 (1405002-02) Water Sampled: Apr-30-14 15:27 Received: May-01-14 08:50

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Kjeldahl Nitrogen	U	J		0.50	mg/L	1	B406056	Jun-16-14	Jun-17-14

Nidia Fuentes, Analyst

Environmental Protection Agency Region 5
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Water Division, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: New Horizon Dairy, LLC Project Number: 02CB2014 Project Manager: Cheryl Burdett	Reported: Jun-23-14 11:46

Notes and Definitions

J	The identification of the analyte is acceptable; the reported value is an estimate.
U	Not Detected
NR	Not Reported

Nidia Fuentes, Analyst

Items for Project Manager Review

LabNumber	Analysis	Analyte	Exception
			Default Report (not modified)
			VERSION 6.12.2008
	TKN DA	(Water)	RPD calculations based on %Recovery
1405002-02	TKN DA		Sampled->Prepared > 28.00 days
B405072-MS2	TKN DA	Total Kjeldahl Nitrogen	Exceeds upper control limit
B406056-MRL1	TKN DA	Total Kjeldahl Nitrogen	Exceeds lower control limit

Sample, Log and Extraction Comments

1405002-01
TKN DA

pH = 1
initial vol.=5mL, pH = 1

1405002-02
TKN DA

pH = 1